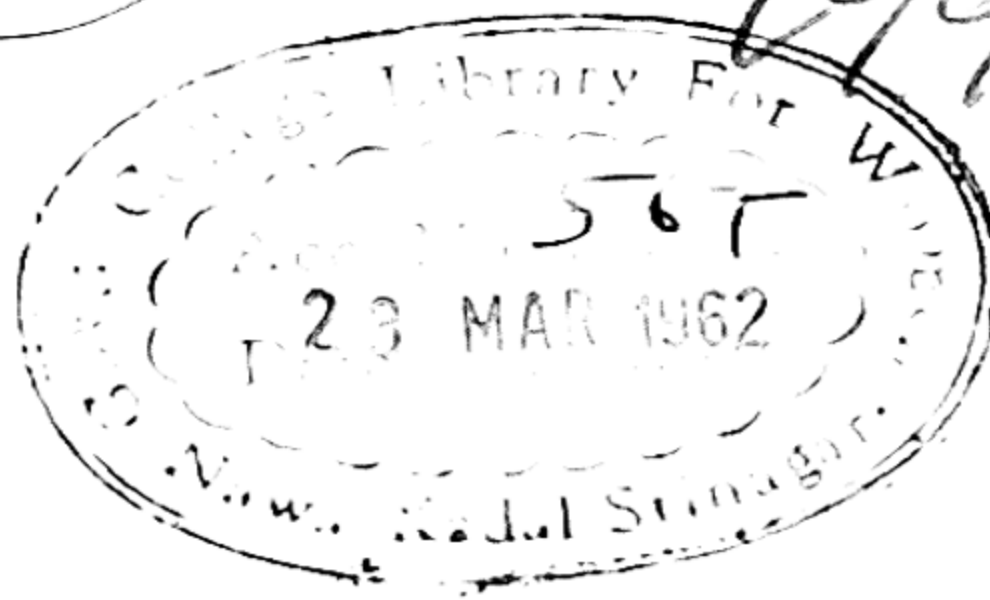


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A STUDENT'S HANDBOOK OF HOUSEWIFERY

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A STUDENT'S HANDBOOK OF HOUSEWIFERY

BY
A. MARGARET KAYE

until lately

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Warden of the Hall of Residence
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WITH A FOREWORD BY
RUTH WHITAKER

NINE TABLES, FORTY-TWO
ILLUSTRATIONS, AND
FIFTEEN DIAGRAMS

REVISED EDITION

J. M. DENT AND SONS LIMITED
BEDFORD STREET, LONDON W.C.2

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J. M. DENT & SONS LTD
Aldine House · Bedford Street · London
Made in Great Britain
at
The Aldine Press · Letchworth · Herts
First published 1940
Last reprinted 1958



11/11/41

FOREWORD

I have read Miss Kaye's book with great interest, and shall warmly welcome its appearance.

Housewifery concerns every woman nowadays, as it did in the days of the last Queen Elizabeth, and since most of us have to combine its practice with many other avocations, a manual which is comprehensive and yet brief, authoritative, clear, and above all intent on the achievement of the objective with the minimum expenditure of labour, is a great boon.

I commend the Handbook to every practitioner of housewifery, whether she is caring for her own home, or following a course in a training college or school of domestic science.

RUTH WHITAKER.

Acc. No - 19917

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PREFACE

THE work of a housewife continues to be of a complex nature although greatly aided by electricity and modern science. This book sets out to deal only with basic fundamentals required by the craft of caring for a house and its contents. A fuller knowledge of each section of the book can be obtained by additional reading, and it is hoped that students will have been stimulated to do so.

A. M. K.

CHAPTER I

HOUSEHOLD CLEANING. DUST, ITS CONSTITUENTS AND METHODS OF REMOVAL

HOUSEWIFERY, the work done in a house, is the oldest of the arts, the youngest of the sciences. It entails a very wide knowledge of many subjects, the care of adults and children, in health and sickness, the care and cleaning of the house and its contents, the ordering, storing, and cooking of foods, a knowledge of plumbing and sanitation, an appreciation of colour, line, and form, a knowledge of the purchasing power of money and the ability to keep accurate accounts and many other arts and sciences too numerous to mention.

Cleaning is the removal of all dust, dirt, and foreign matter, and is made necessary by the presence of dust and dirt.

Nature of Dust. The largest proportion of dust is found in busy places. It consists of air-borne particles deposited from the air on to flat surfaces. It is invisible in the air except if seen in a beam of light, and although very light, it is heavier than air.

Dust consists of inorganic and organic substances.

A. *Inorganic*

- (a) Grit.
- (b) Sand from the shore.
- (c) Particles from the making of roadways and from the traffic on the roads.
- (d) Pulverized, dry earth.
- (e) Soot.
- (f) Ash.
- (g) Chalk, etc.

B. *Organic*

- (a) Microscopic scraps of hair.
- (b) Skin.
- (c) Dried excreta from both humans and animals.
- (d) Microscopic animal life which may be harmful or harmless:
 - (i) Bacteria;
 - (ii) Yeasts which cause fermentation;
 - (iii) Moulds, blue, green, white; on cheese, jam, etc.
- (e) Vegetable life, i.e. pollen, fibres of material, cf. woollen industry in Yorkshire.

2 DUST, ITS CONSTITUENTS, AND METHODS OF REMOVAL

CHARACTERISTICS OF DUST

(a) It floats but only for a certain length of time; as it is heavier than air it finally settles on flat surfaces, ledges, etc.

(b) It settles readily and easily, and where there are ledges its presence makes a great deal of work. Modern houses, therefore, have very few ledges, and the junction between the skirt-ing-board and floor is curved and not a right angle.

(c) Dust is caught and held by rough surfaces much more readily than by smooth surfaces, and is much more difficult to remove, e.g. from a carved surface.

(d) It readily becomes entangled with moisture and grease—the result is then known as dirt.

Dust is perfectly dry. *Dirt* is not.

Other matter which spoils the appearance of articles on which it occurs is rust and tarnish; this will be dealt with later.

Stains also spoil the appearance of materials. They may be of:

- (a) Animal origin.
- (b) Vegetable.
- (c) Mineral.

REASONS FOR THE REMOVAL OF DUST AND DIRT

A. *Economic*

- (a) To produce and maintain good health.
- (b) To preserve household furnishings; cf. carpets which are too dirty to lift up.
- (c) To improve the appearance and beauty of things.

B. *Psychological*

- (a) It is morally wrong to live in dirty surroundings.
- (b) Mental as well as physical ill-health may be the result.

Possible Ways of removing Dust

- (a) Dispersal, i.e. shaking, beating, brushing.
 - (b) Collection and dispersal (but it probably comes back again).
 - (c) Collection and destruction.
 - (d) Collection by suction, i.e. by means of vacuum cleaners.
- The dust can afterwards be destroyed. This is the most satisfactory and hygienic method.

REMOVAL OF DUST FROM SMOOTH, FLAT SURFACES

The largest surfaces in a house are the walls and floors. Floors may be covered or not; a carpeted floor produces a rough surface. The following methods of removal apply to both smooth and rough surfaces.

A. Sweeping*Apparatus*

- (a) Long-handled soft hair broom for large smooth surfaces.
- (b) Short-handled hair brush for small smooth surfaces.
- (c) Long-handled fibre broom for carpets.
- (d) Short-handled fibre broom for rugs, stairs, etc.
- (e) Cornice brush and wall broom for walls.

NOTE. A long-handled hair broom covered with a clean duster can be used as a substitute for a wall broom.

- (f) Carpet sweeper for carpets and rugs.
- (g) Bass broom for yards and out-of-door surfaces.

Method of Sweeping

- (a) Work methodically.
- (b) Keep the head of the brush down and work smoothly.
- (c) Do not allow the dust to blow about.
- (d) Keep windows and doors shut.
- (e) Cover up furniture.
- (f) Work towards the fire-place, as the chimney may cause a draught and help to suck up the dust.
- (g) Brush forward or across from side to side. Never brush on to the ankles.
- (h) Collect the dust with a banister brush or dustpan brush into a dustpan.
- (i) Empty the dust on to a piece of newspaper, brush out the pan, remove fluff, threads, etc., from the brush, wrap up the dust and burn it.

NOTE. To avoid damaging the head of a broom when it is not in use, stand it up carefully and correctly on the floor. Cover with a duster or piece of newspaper if standing against a wall. In cupboards the brushes should be hung from proper supports; small brushes can be hung with loops of string, small rings or hooks.

4 DUST, ITS CONSTITUENTS, AND METHODS OF REMOVAL

Sweeping Walls

- (a) Cover the hair and wear an overall.
- (b) Remove pictures.
- (c) Begin at the top and work downwards; work evenly and gently.
- (d) Remove the dust from the broom carefully.

Sweeping with a Carpet Sweeper

A carpet sweeper removes surface dust and collects it in two dustpans placed on either side of a central revolving brush.

B. Dusting

(1) *Dusters*. These should be made of cotton material and must not be fluffy, as they would not be easy to keep clean. They must always be hemmed, otherwise the raw edges may catch and break ornaments, etc. Silk is the best substance, but is unpractical and expensive, except if made from old garments.

(2) *Dusting mops* are made from cotton and are used for floors and skirting-boards.

When using Dusters

- (a) Fold in the corners until a pad is formed.
- (b) Work methodically.
- (c) Use two dusters and use them evenly.
- (d) Remember all ledges and skirting-boards.
- (e) Begin from the top and work downwards.

Disposal of dust after dusting. *Dispersal* is the only method, but care must be taken to remember:

- (a) Other windows, i.e. larder.
- (b) Other people passing below.

Special Dusting

A. *Damp dusting* used

- (a) In invalids' rooms.
- (b) On tops of wardrobes, pictures, etc. Use one damp duster only, and polish with the other duster.

B. *Oiled duster*, for polished wood. Use oil on one duster only and polish with the other. Both are very hygienic methods.

C. *Dusting with a cotton floor mop.*

REMOVAL OF DUST FROM ROUGH SURFACES

Carpets can have smooth and rough surfaces. The dust must be brushed right out of the pile, therefore brush the wrong way of the pile, and finish by smoothing it down the right way. Use a stiff broom or a hand whisk. Sweep the dust on to a smooth flat surface and then collect it in a dustpan. A carpet sweeper or vacuum cleaner can be used for removing surface dust from a carpet or rug.

Removal of Dirt

Dirt is dust which has become fixed by means of grease or moisture. Cleaning is done if the grease or moisture is removed thus automatically freeing the particles of dust. This cleaning can be done by:

- (a) Washing with water and a grease remover such as soap or a soapless detergent.
- (b) Washing with water, soap, and a scouring agent (or abrasive).
- (c) Using a grease solvent only, i.e. petrol (cf. dry cleaning).
- (d) Using a grease absorbent, i.e. chalk, magnesia, fuller's earth, etc.

DUST, ITS CONSTITUENTS, AND METHODS OF REMOVAL.

NOTES

CHAPTER II

CHOICE, CLEANING, AND CARE OF WOOD

✓ **Wood.** Some use for this material is found in some form, in every room, every house, every country. Large numbers of different timbers are used:

- (a) In the making of apparatus, i.e. chopping boards.
- ✓ (b) For making furniture.
- (c) For beautifying the house, e.g. carved panelling, etc.
- (d) In the construction of the house, i.e. window-frames, door-frames, etc.

Seasoning of woods. All timber should be well seasoned before use. This means that the sap or moisture which fills its cells has been gradually dried out of the wood, and this causes shrinkage. If irregularly dried the wood becomes warped and twisted. When improperly-seasoned wood is used the sap oozes out and stains the surface. Doors and windows then fit badly; utensils lose their shape; boards warp and split. All woods do not require the same length of seasoning: oak requires twenty to thirty years, deal from two to three years.

KINDS OF WOODS

Deal. White or yellow. Used for floors, tables, spoons, pastry-boards.

Elm. Heavier, harder, darker than deal. Used for floors, sinks, stools, chopping, and drying-boards.

Oak. Hard, durable, expensive. Used for furniture, kitchen fittings (sometimes), floorings, sieves.

Sycamore. Harder and whiter than deal, and has a finer grain. Used for furniture.

Beech. Hard. Used for kitchen utensils, rolling-pins, etc.

Mahogany, walnut, lime, pine, and ebony are all used mainly in the making of furniture.

Wooden Surfaces. These may be

- (a) Left smooth and plain.
- (b) Covered with some protective coating.

Woods which are left unprotected may be

- (a) Soft, i.e. deal, used for pastry-boards.
- (b) Hard, i.e. elm, used for chopping-boards, bread-boards, draining-boards, etc.

GENERAL POINTS TO BE NOTED WHEN CLEANING PLAIN, UNFINISHED WOOD

- ✓ 1. *Avoid roughening the surface.* Do not
 - (a) Use too hard a scrubbing brush which will remove the softer parts of the wood and tear the fibres.
 - (b) Use too hot water which softens the wood and causes it to swell.
 - (c) Use too coarse an abrasive. This will cut the fibres.
 - (d) Scrub the wrong way of the grain. The scrubbing should be done along the grain.
- ✓ 2. *Avoid discoloration.* This can be accomplished by avoiding
 - (a) Too hot water.
 - (b) Too much soap, soda, or other cleaning agents.
 - (c) Too great heat, either moist, i.e. hot water, or dry, i.e. exposure to direct sunshine or direct heat from a fire.
- ✓ 3. *Avoid distortion or warping.* This can be done by
 - (a) Not using too much water.
 - (b) Not allowing the wood to remain wet for a great length of time.

Wood which has become warped cannot be restored successfully to its original condition.

FINISHED WOODEN SURFACES

Wood surfaces can be finished in various ways, the object being

- (a) To preserve the wood.
- (b) To beautify it.
- (c) To cover up the ugly graining of cheap wood.

Methods Used

1. *Painting.* This may be varnished or not. Paint consists of three things:
 - (a) Pigment or colouring matter.
 - (b) Media in which the pigment is conveyed, i.e. linseed oil, turpentine, tung oil.

Roller Board.

- (c) The drier. This is a very important constituent. Cheap paint dries slowly or badly or not at all, because cheap driers are used, or none at all. Paint must always be applied in thin coats, and several coats used to produce a good effect.
2. *Enamelling*. Enamel is a much harder substance than paint and generally gives a much smoother surface. The finished surface can be
- (a) Very glossy.
 - (b) Somewhat duller (known as eggshell finish).
- Enamel is a mixture of paint and varnish; it is much more durable and much more easily cleaned than paint.
3. *Staining*. This is a very cheap and inefficient way of finishing wooden surfaces. *Stains* may be
- (a) Water stains, made from substances which are soluble in water; not very satisfactory as the colouring rubs off, but useful where there is not much wear and tear.
 - (b) Oil stains. Much more durable than water stains; they dry more slowly but penetrate the wood more thoroughly. The liquids used are turpentine and linseed oil; the colouring matter burnt and raw sienna, burnt and raw umber, vandyke brown, etc.
4. *Staining and varnishing*. The addition of a layer of varnish over the stain gives slight, additional protection. The varnish may or may not be coloured. Varnish is a resin dissolved in a liquid. It may be either
- (a) Spirit varnish, the solvent being either methylated spirit, turpentine, or benzine; or
 - (b) Oil varnish. Resin dissolved in a volatile oil, with the addition of a drying oil, and a drier.
- The resin used in varnish is usually 'shellac,' which is the secretion of the lac insect found in India.
5. *Varnishing only*. This is hardly ever used except in the foreign manufacture of very cheap toys and small articles of household use, such as trays, etc.
6. *Staining and polishing*. This is slightly more efficient, the layer of polish acting as a preservative, and also as a protective covering to the wood.
7. *Polishing*. This method is used for wood which is naturally very beautiful in colouring and graining. Methods of polishing are:
- (a) French polishing. This is a long, tedious process which requires to be done by experts. It is a highly skilled

trade and the best results can only be obtained by experienced craftsmen. The polish is applied by means of a rubber made of cotton-wool wrapped in a clean white linen cloth. The cotton-wool is soaked with the polish, covered with the linen cloth and then passed quickly all over the work with a smooth sweeping movement, accompanied by slight pressure. This is repeated a very great number of times until the desired highly polished finish is obtained. The polish is made by dissolving orange shellac in alcohol. The rubbing can also be done by electric power.

- ✓ (b) Rubbing with oil or oily liquid polishers. Linseed oil is the basis of nearly all liquid polishes. It preserves and darkens the wood as well as polishes.
- ✓ (c) Rubbing with wax polishes. Beeswax is the basis of a large number of these.

8. *Painting with cellulose.* This type of paint does not smell as does oil paint; it also dries very quickly. The solvents used are very volatile and inflammable and therefore must not be used near a naked flame. Buy a good make, the cheaper ones leave much to be desired owing to the cheapness of the constituents. Originally cellulose was used for commercial purposes only, and was always applied by a spray, because the substance dried so quickly. Manufacturers now produce a cellulose which dries sufficiently slowly to enable it to be applied with a brush; at the same time the gloss is good and the substance is durable. Cellulose dries in fifty to sixty minutes, but begins hardening much sooner. Cellulose is not suitable for outdoor work.

9. *Plastic paints* are becoming increasingly popular, since they enable surfaces to be 'textured,' giving extremely interesting and attractive results. They are bought chiefly in the form of paste, to which water is added, the thickness and consistency varying according to the nature of the texturing. The choice of texture should, of course, be in keeping with the use of the room in question. To produce the effect, brushes, stipplers, knives, combs, crumpled paper, and even the fingers can be used. Texturing should, however, preferably be carried out by those who are experienced in handling these paints, since many technical problems are involved.

10. *Commercial finishes* of various types to produce such effects as that of age, etc. 'Liming' is a surface frequently produced on oak.

CLEANING OF WOODEN SURFACES

Daily Cleaning of White Wood

1. *Soft white wood*

- (a) Remove all surface dust; scrape pastry-boards with the back of an old knife.
- (b) Wipe over with a net cloth wrung out of moderately hot water.
- (c) Rub the soap on the scrubbing brush and scrub the way of the grain. The soap should be used sparingly.
- (d) Remove stains if necessary. Rinse thoroughly, using moderately hot water and the net cloth.
- (e) Rinse finally with cold water. This keeps the wood a good colour.
- (f) Dry with the net cloth, which should be well wrung out.
- (g) Finish drying in the open air if possible; if not, dry in a current of air. The fresh air helps to whiten and sweeten the wood.

NOTE. If a cleaning powder is used sprinkle it sparingly over the damp surface and then scrub well.

2. *Hard white wood*. As for soft white wood (see above), but with the addition of scouring agents if necessary:

- (a) Water, soap, and silver sand.
- (b) Water and commercial cleaning powder.

Removal of Stains from White Wood

- (a) Meat or blood stains. Scrub with cold water or sprinkle the stain with kitchen salt, and then scrub.
- (b) Vegetables. As for (a).
- (c) Oil and grease. Scrub with hot soda water.
- (d) Ink. Rub with the rind of a squeezed lemon dipped in salt.

Special or Occasional Cleaning of White Wood

None.

Cleaning of Wood finished with a Protective Coating

- (a) Daily cleaning. Dust thoroughly to remove all loose dust and to prevent the formation of a greasy film which would combine with the dust to form dirt. This work is usually done with two dusters. An electric vacuum-cleaner can also be used. For carved or very high surfaces use a small dusting brush.
- (b) Rub hard whilst dusting to keep the surface well polished.

Special or Occasional Cleaning of Wood finished with a Protective Coating

This cleaning is much more thorough than the daily cleaning and the frequency with which it is done varies. For details see *Cleaning Analysis*, page 16.

Special Woods

- (a) *Old Oak*. A high polish is not required on this wood. It may be washed with either
Vinegar and warm water; or
Warm beer. (These help to darken the wood.) Dry thoroughly. Polish with linseed oil.
- (b) *Natural Oak* (polished). Clean dusters and polishing cloths are essential if the original colour of this wood is to be kept. If the wood becomes stained or marked, rub very lightly along the grain with the very finest grade of sandpaper or steel wool. Afterwards polish with white furniture polish or cream.
- (c) *Natural Oak* (unpolished). Treat as for plain unfinished wood. A little white furniture cream or wax polish will protect the surface, but if used will slightly alter the character of the finish.
- (d) *Limed Oak*. Wash with warm soapy water, rinse, and leave to dry. Rub grease marks with a cloth moistened with a grease solvent. Allow a little metal polish partially to evaporate in a saucer and with the sediment rub over the surface and allow to dry.
- (e) *Teak* garden furniture—unpainted, should be rubbed over occasionally with linseed oil.
- (f) *Ebony*. Clean and polish as for old oak.

Care of Wood

- (a) Avoid spoiling the surface by ill-usage or incorrect cleaning.
- (b) Remove at once anything which may be spilt on the wood.

- (c) Darken light-coloured marks made by scratches, etc., with applications of linseed oil.
- (d) Remove dents and bruises by a hot iron pressed on a pad of wet brown paper placed over the dented surface. The heat causes steam to form, which makes the wood swell. This process cannot be used on varnished wood.

Carved Wood

The cleaning and polishing of this type of wooden surface is not easy. A very soft-bristled brush may be used for the removal of dust and for the washing. Another soft brush should be used for the application of, and rubbing in, of the polish. The bristles penetrate the crevices as a cloth cannot do.

Liquid polishes only must be used on carved surfaces, as paste or cream polishes would be extremely difficult to rub in thoroughly and completely.

SPECIAL TERMS USED IN CONNECTION WITH WOODWORK

Veneer. The name given to a process of covering up a cheap wood with layers or strips of an expensive wood, which are attached with glue. These thin layers are cut from the log by special tools, and can vary considerably in thickness. When cleaning veneered furniture care must be taken not to chip or warp the veneer.

Inlaid. Decorations of dark wood with strips of light wood and vice versa. When cleaning care must be taken not to loosen the strips in any way. This type of decoration is also known as marquetry.

Lacquer. A kind of special polishing and decorating done mainly by the Chinese. It takes a brilliant polish and becomes very hard.

Laminated Wood. A development of plywood consisting of two or more outer layers or thick veneer, and a centre core composed of numerous strips of wood which are glued together in the form of a thick wide board. It is also known as laminwood, battinboard, or block board. The construction of this type of board prevents shrinking and warping and renders the board sufficiently stiff and strong to enable framing to be dispensed with, thus making it eminently suitable for use in the manufacture of flush doors, or for panelled framing, counter tops, etc. Laminated board may vary in thickness from $\frac{3}{16}$ inch to over 2 inches.

✓ *Plywood.* Thin veneers, or layers of wood, glued together under pressure, with the grain running in opposite directions. The plywood sheets or layers are cut from the log by special tools in a manner that produces no sawdust, so that there is an absolute minimum of waste, which allows a very much larger proportion of the whole log to be turned to useful purposes than in the old days. The basic timbers for the manufacture of plywood come from the Baltic and from Canadian birch.

Good plywood is much stronger than ordinary wood, and is much more stable. The best qualities are now resin bonded, resistant to peeling and bubbling and are water and fire resistant. As little glue as possible is used between layers, and as brushes and mechanical spreaders tend to apply more than is really necessary, it is usual for the glue to be 'foamed up' to occupy double its volume before it is used.

Plywood varies from $\frac{1}{32}$ inch to over 1 inch in thickness, and from 3-ply to 30-ply. The thickness can also be stated in millimetres, and 3-ply is usually from 3 to 6 millimetres and 5-ply from 6 to 12 millimetres.

Plywood is continually becoming of greater importance in joinery owing to improvements in manufacture, especially in the glues used for securing the veneers together. The surface of a finished plywood article or piece of furniture is usually finished with a cellulose spray.

FURNITURE POLISHES AND CREAMS

Polishes are liquid; cream is a semi-solid. Both consist of substances of a waxy or oily nature blended with a liquid. Beeswax, white-wax, soap, turpentine, linseed oil, vinegar are all used for polishing furniture. Furniture polishes and creams can be made at home (see Appendix, pages 341 and 342) or bought commercially.

THE SPECIAL OR OCCASIONAL CLEANING OF

Surface	Used for	Apparatus required	Method of Cleaning
A. Paint (i) Indoor, light-coloured	Window- and door-frames; doors; bedroom furniture; skirting boards, etc.	Two soft, clean dusters Bowl of warm soapy water Soft paint-cloth (made of flannelette) Very soft, old nail brush Clean soft linen cloth Stain remover: (a) Powdered whitening (b) Cleaning paste (c) Cleaning powder	(i) Dust thoroughly to remove all loose dust (ii) Wash with warm soapy water, using the flannelette cloth. Be careful of corners and ledges (iii) If very dirty, a soft, old nail brush can be used for crevices; and a wooden skewer for corners (iv) Remove stains by using one of the stain removers, applied with the damp paint cloth (v) Rinse very thoroughly with clean, warm water (vi) Dry with the linen cloth
(ii) Indoor, dark-coloured	Window- and door-frames; doors; skirting boards, etc.	Bowl or bucket of warm water Paraffin Net cloth Linen cloth Linseed oil Rag Two soft, clean dusters	Clean as for light indoor wood, using paraffin and water and a net cloth. Allow 1 tablespoonful of paraffin to $\frac{1}{2}$ bucket of water Rinse with clean, warm water Dry with a linen cloth
(iii) Outdoor, both light and dark-coloured	Most outdoor woodwork	As for dark indoor paint	As for dark indoor paint
(iv) Plastic	As for (i)		
B. Enamel	Window- and door-frames; doors; bedroom furniture; nursery furniture; skirting boards, etc.	As for light indoor paint	As for light indoor paint
C. Stained	For cheap pieces of furniture; cupboard doors, chests, etc.	Two dusters Rag Furniture polish or cream	(i) Dust thoroughly with two clean soft dusters (ii) Never wash, as this would remove the stain

WOOD FINISHED WITH A PROTECTIVE SURFACE

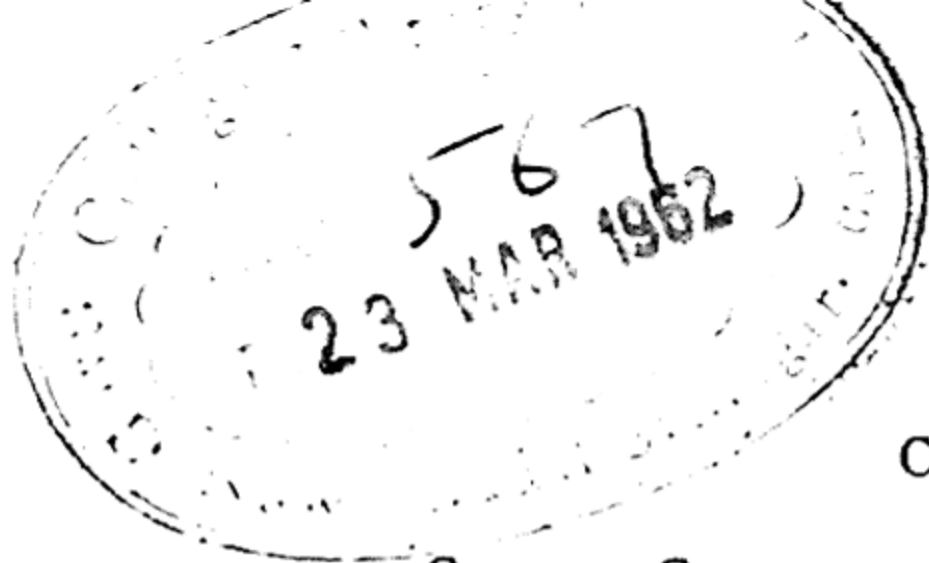
Method of Polishing	Points to Observe	Notes
No polish is applied, as the surface is usually dull Rub thoroughly with two clean soft dusters	Remember: (a) To remove loose dust (b) To avoid great heat (c) To avoid making the wood too wet (d) To avoid substances which will soften the paint (e) To avoid the use of soda and other alkalis	If a large area is to be cleaned, dampen the whole surface with cold water, working from below upwards. The cold water dilutes any trickles of dirty soapy water which may run down the painted surface Clean only a small area at a time Whilst cleaning, let each area overlap the previous piece
The use of paraffin in the washing water helps in the polishing Use linseed oil to give a good polish. Apply the oil with a rag and rub in thoroughly Finish rubbing with two clean soft dusters	Paraffin acts as a cleanser, and its use prevents the formation of soapy, smeary marks appearing on the surface of the paint, which may happen if soapy water is used for cleansing	If the smell of paraffin is objected to, then warm soapy water may be used, as for light-coloured paint Care must be taken to rinse very thoroughly with clean, warm water Avoid using paraffin often, as its constant use may affect the surface of the paint
As for dark indoor paint	Paraffin in the washing water helps to counteract blistering which is caused by climatic conditions	
When new: Rub up with two clean soft dusters When old and shabby: Polish with white furniture cream, applied with a rag, and rub up with two dusters		Enamel has a much harder surface than paint, and is never used for outdoor woodwork. It may have: (a) A very glossy surface, (b) A glossy surface, or (c) A dull surface, known as 'egg shell'
(i) Polish with furniture cream or furniture polish applied with a rag (ii) Finish rubbing with two soft dusters		A very cheap method of finishing wood: Effective only if coloured stains are used

THE SPECIAL OR OCCASIONAL CLEANING OF

Surface	Used for	Apparatus required	Method of Cleaning
<i>D. Stained and varnished</i>	As for stained	Two dusters Bowl of tepid, soapy water Flannelette cloth Linen cloth Rag Furniture polish or cream	(i) Dust thoroughly with two clean soft dusters (ii) Wash with tepid, soapy water, using the flannelette cloth (iii) Rinse thoroughly with tepid water (iv) Dry thoroughly
<i>E. Varnished</i>	Small and very cheap household articles, i.e. trays	As for stained and varnished wood	As for stained and varnished wood
<i>F. Polished</i> (i) French	For expensive types of furniture, particularly small pieces, such as coffee tables, cake stands, etc.	Two soft, clean dusters Bowl of warm soapy water, or Bowl of warm water and vinegar Soft flannelette cloth Clean linen cloth Rag Furniture polish or furniture cream	If very dirty: (i) Wash with warm soapy water, using a soft flannelette cloth (ii) Rinse with clean, warm water (iii) Dry with a soft linen cloth If not dirty, but sticky with finger-marks: Wash with warm water and vinegar, using a soft flannelette cloth. Allow two tablespoonfuls of vinegar to one pint of water
(ii) Wax-polished	For good old and modern furniture; doors; door-frames; panelling; banisters, etc.	Two soft, clean dusters Bowl of warm soapy water Soft flannelette cloth Clean linen cloth Wax polish Rag	As for french - polished wood
(iii) Oil-polished	For good modern furniture, floors, doors, etc.	Two soft, clean dusters Bowl of warm soapy water Soft flannelette cloth Liquid furniture polish Rag	As for french - polished wood
<i>G. Cellulose</i>	For modern furniture: tables, chairs, etc.	Two soft, clean dusters Bowl of warm, soapy water Flannelette cloth Bowl of clean, warm water Linen cloth	(i) Dust thoroughly with two clean soft dusters (ii) Wash with warm soapy water, using a soft flannelette cloth (iii) Rinse with clean, warm water (iv) Dry thoroughly with a clean linen cloth

WOOD FINISHED WITH A PROTECTIVE SURFACE (cont.)

Method of Polishing	Points to Observe	Notes
When new: Rub with two clean soft dusters When old and dull: Polish with furniture cream or furniture polish, applied with a rag and rubbed up with two dusters	Avoid the use of (a) Hot water (b) Soda (c) Abrasives	Varnish is softened by heat, and never re-hardens with the same bright, glossy surface
As for stained and varnished wood	As for stained and varnished wood	Hardly ever used
Polish with furniture cream or furniture polish. Apply a small quantity only, and rub well with a rag Finish polishing with two soft dusters	The surface is very easily spoilt, therefore great care must be taken, (i) With the cleaning (ii) With the polishing Liquid polishes produce a better result than paste polishes	Owing to the ease with which French polish can be damaged, and the expense of repairing the damage, it is decreasing in popularity
As for french-polished wood, using a wax polish	A small quantity only of polish should be applied, and rubbed in very thoroughly On exposure to the air the wax polish dries and hardens, leaving a transparent, protective coating over the wood	
As for french-polished wood	Liquid furniture polishes are particularly useful for carved surfaces, as the liquid does not clog up the carving	
Rub with two soft dusters No polish need be applied owing to the highly glossy nature of the paint	The surface is hard and very glossy	Cellulose is never used for outdoor woodwork. The colours are bright and sometimes crude. Cellulose chips very easily



CHAPTER III

CHOICE, CLEANING, AND CARE OF METALS (WHITE AND COLOURED)

Cleaning and Care of Metals

Few metals possess properties which make them suitable to be used alone, but most are capable of uniting one with another to form a class of compounds called 'alloys' in which the physical properties are sometimes quite different from those of the constituent metals. The number of useful metals is increased by means of alloys.

Action of Certain Agents on Metals

1. *Air.* Dry air has no effect; moist air at the usual temperature has little effect, but when the air is saturated with water vapour metals are freely acted upon, e.g. silver and copper readily tarnish in foggy weather. Metals most readily acted upon are silver, copper, brass, tin, iron, and zinc.
2. *Heat.* Metals are more readily oxidized when heated than at ordinary temperatures, i.e. tin is tarnished.
3. *Water.* Pure water has practically no effect. Water containing lime or chalk forms a deposit on copper. With lead, iron, and zinc it forms a coating which prevents further corrosion.
4. *Acids and alkalis.* Most metals are dissolved, or more or less acted upon, by acids and alkalis; but all metals are not acted upon in the same way. Certain metals are tarnished or blackened, especially silver, tin, copper, lead, owing to the formation of sulphides.

A *metal tarnish* is a compound of the metal and some constituent of the air, and may be (a) an oxide—a basic carbonate; (b) a sulphide. The tarnish on iron is commonly called iron rust; the tarnish on silver is a compound of silver and sulphur, namely silver sulphide. It is a black tarnish and is dependent for its formation on the presence of sulphur in the air. Silver is more easily tarnished in towns, etc., where the air, owing to the excessive amount of smoke, contains much sulphur. Silver sulphide is also formed when the metal comes in contact with substances containing sulphur such as egg-white, wool, vulcanized rubber, and bleached and dyed materials in which sulphur may have been used in the

manufacture. The tarnish of aluminium is an oxide of the metal, is white in colour, and gives the metal a dull appearance.

The Removal of Metal Tarnishes

The method chosen to remove a metal tarnish will depend upon its nature and also on the nature of the metal. A common method is by the use of a mixture of an abrasive mixed with a grease solvent, or emulsifier, or acid. Acids will remove tarnishes caused by oxidation and a carbonate compound. The disadvantage is that the acid may also attack the metal. The addition of a grease solvent or emulsifier removes the thin film of grease which is nearly always present.

The metals found in a house may be either

1. *Ornamental metals*, i.e. silver, electro-plate, Sheffield plate, oxidized silver, brass (this may be lacquered or not), copper, bronze, Britannia metal, pewter, steel, etc.; or
2. *Useful metals*. Those found mainly in the kitchen, i.e. iron, copper, aluminium, tin, galvanized iron, etc.

Metals may also be classified according to their colour:

1. *White metals*, i.e. silver, pewter, tin, etc.
2. *Coloured metals*, i.e. brass, copper, etc.

White Metals

- A. *Aluminium*. This metal is light, durable, and unbreakable, and has a characteristic silvery polished surface. It may be procured in many qualities and may be either
- (a) Sheet aluminium, thin, cheap, and easily bent, or
 - (b) Cast aluminium, a much thicker, harder, and more durable type.

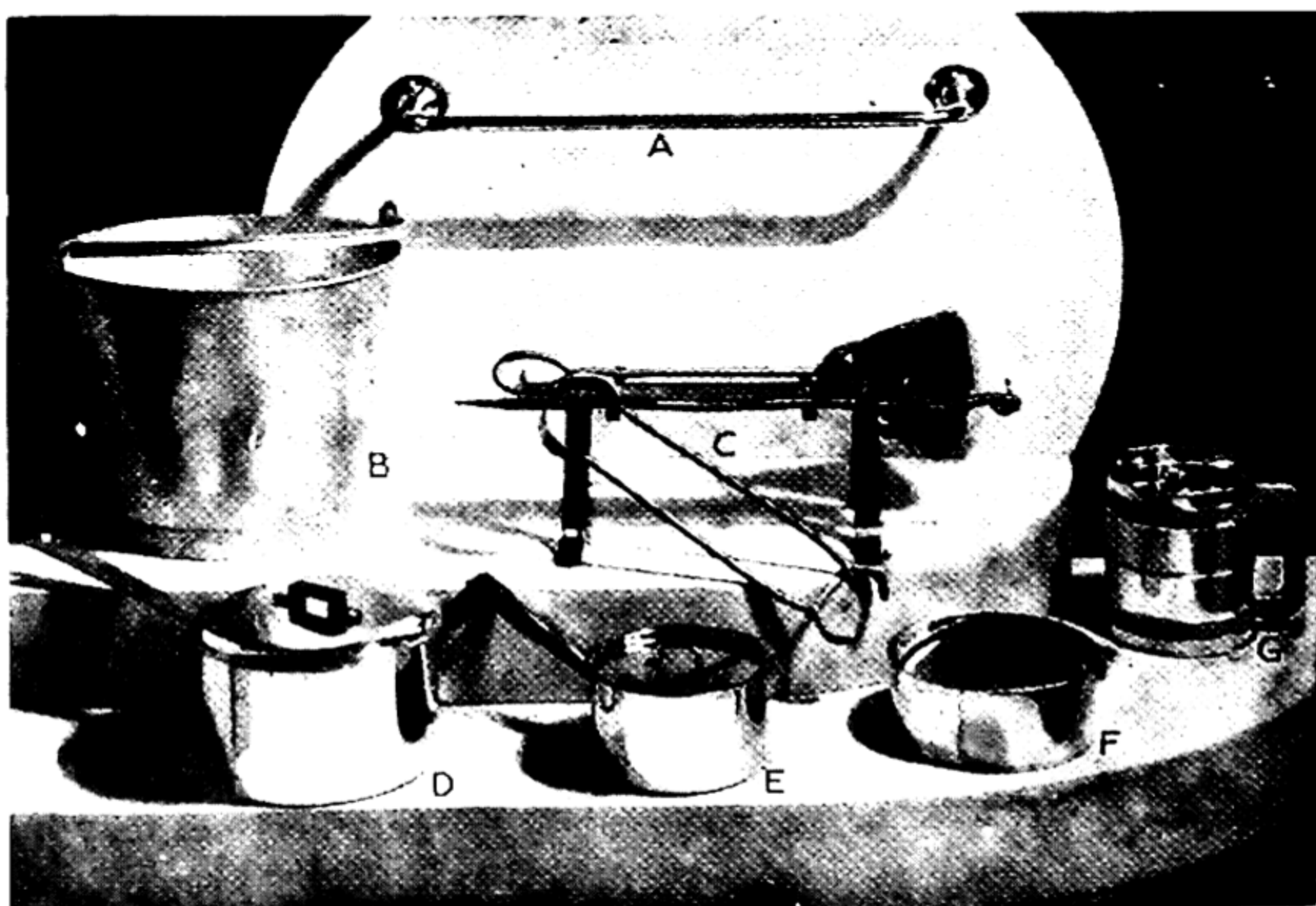
It is used for the making of saucepans, measures, and various pieces of kitchen equipment.

- B. *Britannia Metal*. This is an alloy of tin, copper, zinc, and antimony (a brittle, bluish-white metal of flaky texture). Bismuth (a brittle metal of a reddish-white colour) and occasionally lead are added. It is silver white in colour and is capable of taking a very high polish. It is now usually found in kitchens only.

- C. *Chromium*. A metallic element, not found free in nature. It was discovered by Vauquelin in 1797. Chromium-plating is a very difficult process, and much care has to be expended in the manufacture of appliances with this type of finish. It consists of an electrolytic deposit of chromium on to a foundation metal, usually nickel, or some similar white metal.

The plating on cheap and unguaranteed brands may chip or peel off, leaving the surface of the under-metal exposed to the action of the atmosphere. The characteristic colour and finish of chromium is a bright greyish blue.

It is one of the hardest metals known, is not affected by the chemicals of air or of food; does not scratch easily, and is



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HOUSEHOLD WHITE METALS

A. Chromium towel rail; B. Galvanized iron bucket; C. Steel fire irons; D. Aluminium saucepan; E. Stainless steel saucepan; F. Unpolished cake-tin; G. Polished tin flour dredger.

therefore easy to keep in good condition. It is used for bath room fittings, for taps on sinks, for hooks, towel-rails, table-tops, etc.

10. *Electro-plate or Silver Plate.* This consists of a foundation of white metal or nickel sprayed with a layer of silver. Cheap electro-plate has coloured metal underneath which eventually shows through, making the article appear very shabby. The quality of the plate will depend on:

- (a) The value of the foundation metal.
- (b) The amount of silver deposited on the foundation.

The coating or spraying is done electrically. The plate is always marked with a stamp to indicate the length of its guaranteed life: $A^1=15-30$ years; $A^2=15$ years.

The best electro-plate is marked E.P.N.S., to indicate that the layer of silver is sprayed over a good white metal, i.e. nickel silver.

- E. *Galvanized Iron*. This is iron coated with a protective layer of zinc, which prevents the iron from coming into contact with the air, and so becoming liable to rust. Zinc is a soft metal not often used alone.
- F. *Iron*. This is used for the making of kitchen equipment such as the body of a kitchen range, saucepans, kettles, etc. Equipment made from iron is always very heavy, therefore pans should be provided with a loop-handle in addition to the ordinary handle. This facilitates the lifting. Iron saucepans are made from either
(a) Wrought-iron; or (b) Cast-iron.
The former is more durable, heavier, and less brittle.
- G. *Lead*. This is rarely used now in households, except for the making of lead pipes. It is a rather soft metal and marks very easily.
- H. *Monel Metal*. This is an alloy containing 67 per cent nickel. It is as strong as steel, yet immune from rust and never corrodes or tarnishes. At present its disadvantage is its high initial cost. It is used for sinks, draining-boards, table-tops, etc.
- I. *Oxidized Silver*. This metal is always dull in appearance, being steel coated with an oxide of silver. It is used mainly for making small ornaments and trinket boxes.
- J. *Pewter*. This is an alloy. Old pewter consists of 4 parts tin, 1 part lead. The finest pewter consists of tin, antimony, copper, and no lead. Modern pewter contains copper, antimony, and bismuth.
- K. *Stainless Steel*. This is a special type of steel which has been so treated as to prevent any reaction with air, acids, etc. It is used mainly for the making of cutlery, and also for fireplaces, fenders, and fire-irons. It is much more expensive than ordinary steel. Knives made from stainless steel are never quite as sharp as those made from ordinary steel.
- L. *Staybrite Metals*. This name is given to various white metals which do not rust or stain, or give any chemical reaction in ordinary household usage. They are used for the making of a variety of household utensils and equipment such as taps, sinks, draining-boards, table-tops, etc.

- M. *Steel*. This is one of the hardest metals used in a household, and is capable of taking a very high polish. It rusts very quickly whenever moisture is present in the air.
- N. *Silver*. This is a very white metal, which takes a very high polish. It is a soft metal, and to harden it an alloy is generally mixed with it, copper being mostly used; occasionally zinc and nickel. Standard solid silver contains 925 parts silver, 75 parts copper. Genuine silver of British make is 'Hall Marked,' that is, marked with the authorized impression of certain symbols to indicate the true value and the fineness of the metal. The stamping is done at various 'Assay Offices' in the United Kingdom. The price of silver varies according to the market value of the metal.

The solid silver found in a house may be classified as either
(a) Ornamental silver; or (b) Table silver.

Storage of Silver

- (a) Store in silversmith's boxes or cases.
- (b) Store in cases made of flannelette or chamois leather, or baize lined with chamois leather.
- (c) Wrap in special tissue paper. This is impregnated with special chemicals which prevent tarnishing.

NOTE. If storing for any great length of time, wrap in tissue-paper before putting into the cases.

- O. *Sheffield plate*. This is silver sprayed over a foundation of copper. It was first made about 1742 when copper was comparatively cheap. Copper is now much more expensive, so Sheffield plate is not now made to any great extent. It is found usually in the form of ornaments such as candlesticks.
- P. *Tin*. A silvery white metal, which can easily be bent and worked into special shape. The tin in a household may be divided into
- (a) Polished, i.e. saucepan lids, measures, funnels, etc., and
 - (b) Unpolished, i.e. baking tins, oven sheets, cake tins, etc.
- Q. *Zinc*. This is a somewhat soft metal, and is not much used alone. It does not tarnish or corrode in moist air, so it is useful for coating metals which do tarnish, such as iron—thus making galvanized iron.

TABLES

Metal	Apparatus required	Stain Remover
A. <i>Aluminium</i>	Hot soapy water Clean hot water Saucepan brush, <i>or</i> Saucepan scourer, <i>or</i> Steel wool Net cloth	Steel wool
B. <i>Britannia Metal</i>	Two clean soft dusters	
C. <i>Chromium-plate</i>	Warm soapy water Warm clean water Flannelette or net cloth Linen cloth Two soft clean dusters	
D. <i>Electro-plate</i>	As for Britannia metal	
E. <i>Galvanized Iron</i>	Bucket of hot soapy water Soda Net cloth, or floor cloth Bucket of clean hot water Paraffin Newspaper	(i) Bath-brick (ii) Sand
F. <i>Iron</i>		

OF WHITE METALS

Method of Cleaning	Rubbing Up	Notes
(i) If greasy steep in very hot water, otherwise steep in cold water (ii) Wash with hot soapy water, using a saucepan brush, <i>or</i> a saucepan scourer, <i>or</i> a piece of steel wool (iii) Remove stains by using: Steel wool (iv) Rinse thoroughly in clean hot water (v) Dry with the net cloth	The scouring with steel wool brightens the surface a little but cannot be considered as polishing	Soda must never be used in the cleaning of aluminium
Dust thoroughly to remove surface dust	Rub hard whilst dusting	
(i) If dirty wash with warm soapy water (ii) Rinse with clean warm water (iii) Dry with the linen cloth	Rub with two soft clean dusters	
As for Britannia metal	As for Britannia metal	
(i) Wash in hot soapy water (ii) If greasy, add soda (iii) Remove stains with: (a) Powdered bath-brick <i>or</i> (b) Silver sand (iv) Use a net cloth or a floor cloth, according to the type of article being cleaned (v) Rinse thoroughly with clean hot water (vi) Dry with the net cloth or the floor cloth <i>Another method</i> (i) Clean with paraffin, using a pad of newspaper (ii) Rinse thoroughly with clean, hot water, using a floor cloth (iii) Dry with the floor cloth	None	Cans and pails should always be left dry Bath-brick. This is a preparation made from the clay and the sand of the river bed at Bridgwater in Somerset, and is sold in powdered form.
Clean according to the protective coating		Never used except with a protective coating of (a) Paint (b) Tin (c) Zinc (d) Enamel (e) Black-lead

Metal	Apparatus required	Stain Remover
G. <i>Lead</i>	As for chromium-plate	
H. <i>Monel Metal</i>	Bowl of hot soapy water Bowl of clean hot water Net or flannelette cloth Linen cloth	
I. <i>Oxidized Silver</i>	As for chromium-plate	
J. <i>Pewter</i>	As for chromium-plate	
K. <i>Stainless Steel</i> (i) Cooking utensils	As for aluminium	None
(ii) Cutlery	As for ordinary steel knives	None
(iii) Ornamental	As for chromium-plate	None
L. <i>Staybrite Metals</i>	As for chromium-plate	
M. <i>Steel</i> (i) Cooking utensils	As for aluminium	As for aluminium
(ii) Cutlery	<i>For cleaning</i> Jam jar of hot soda water Newspaper Very hot soapy water Cotton mop Soda Knife cloth <i>For polishing</i> Duster or selvyt duster Knife polish Knife board Cork or piece of potato Knife machine Duster	Cleaning powder

WHITE METALS (cont.)

Method of Cleaning	Rubbing Up	Notes
As for chromium-plate	As for chromium-plate	
(i) Wash with hot soapy water, using the net or flannelette cloth	None	
(ii) Rinse with clean hot water		
(iii) Dry with the net or flannelette cloth, and finish with the linen cloth		
As for chromium-plate	As for chromium-plate	
As for chromium-plate	As for chromium-plate	
As for aluminium	As for aluminium	Soda does not react with stainless steel, may therefore be used for cleansing greasy pans
As for ordinary steel knives	None	
As for chromium-plate	As for chromium-plate	
As for chromium-plate	As for chromium-plate	
As for aluminium	As for aluminium	Soda can be used for cleansing
(i) Remove grease by wiping the knives with newspaper	A. <i>On a knife board</i>	The handles of knives must never be allowed to get wet, otherwise the cement holding the blade in position will be softened and the blade become loose <i>Polishing</i> has to be done daily <i>Storing</i> See page 52
(ii) Place the blades to steep in the jam jar containing hot soda water	(i) Place the rounded end of the knife board to the left of the worker	
(iii) Wash in hot soapy soda water, using the cotton mop	(ii) Hold the knife flat on the board and rub firmly	
(iv) Remove stains	(iii) Use only a small quantity of knife polish	
(v) Rinse off the stain remover	(iv) Attend to the back and shoulders of the knife	
(vi) Dry with a knife cloth	(v) Obstinate stains can be removed by rubbing with a cork or a piece of potato	
(vii) Rub with the clean dry duster	B. <i>By means of a knife machine</i>	
	(i) Place the knives in position	
	(ii) Turn the handle until the knives are well polished	
	(iii) The shoulders and backs may have to be polished on a knife board	
	(iv) Dust thoroughly with a duster	

Metal	Apparatus required	Stain Remover
M. <i>Steel (cont.)</i> (iii) Ornamental	Two dusters	
N. <i>Silver</i> (i) Solid (ornamental)	As for Britannia metal	
(ii) Table	Bowl of very hot soapy water Bowl of very hot clean water NOTE. A double sink can be used instead of the bowls Cotton mop Two enamel trays (a) To hold dirty silver (b) To hold clean silver	Kitchen salt to remove egg stains
O. <i>Sheffield Plate</i>	As for solid silver	As for solid silver
P. <i>Tin</i> (i) Polished	Hot soapy water Soda Net cloth	Sand or commercial cleaning powder
(ii) Unpolished	As for polished tin	As for polished tin
Q. <i>Zinc</i>	As for galvanized iron	

WHITE METALS (cont.)

Method of Cleaning	Rubbing Up	Notes
Dust thoroughly to remove surface dust	(i) Rub with dry steel wool, <i>or</i> (ii) With emery paper Finish with two dry dusters	The amount of daily rubbing up varies according to weather conditions
As for Britannia metal	As for Britannia metal	
(i) Separate the spoons from the forks (ii) Put all the spoons (or the forks) into the hot soapy water (iii) Wash thoroughly, using the cotton mop (iv) Rinse in very hot, clean water, <i>or</i> rinse in boiling water, having first placed the sheet of aluminium and soda in the rinsing basket (v) Lift out the rinsing basket and allow the silver to drain (vi) Dry whilst still hot with a clean dry linen cloth	(i) Rub hard whilst drying (ii) Rub daily with: (a) Chamois leather, <i>or</i> (b) Selvyt duster, <i>or</i> (c) Impregnated cloth (iii) Use the chemical solution method for rinsing, e.g. aluminium, soda, and boiling water	<i>Silver salt - cellars</i> should always be fitted with glass liners to prevent the silver surface from being 'pitted' by the salt. <i>Silver salt - spoons</i> must always be removed from the salt for the same reason.
As for solid silver	As for solid silver	
(i) If very dirty steep in hot soapy water (ii) Wash in hot soapy water, using a net cloth (iii) If greasy, soda can be added to the washing water (iv) Remove stains by using (a) Steel wool, <i>or</i> (b) Sand (v) Rinse in clean hot water (vi) Dry with the net cloth (vii) Finish drying in a warm place	None	
As for polished tin		
As for galvanized iron	As for galvanized iron	

SPECIAL CLEANING AND POLISHING

Metal	Apparatus required	Stain Remover
A. <i>Aluminium</i>	<i>For cleaning</i> As for daily cleaning <i>For polishing</i> Powdered whiting Rag Two clean dry dusters	As for daily cleaning
B. <i>Britannia Metal</i>	As for table silver	As for table silver
C. <i>Chromium-plate</i>	No special cleaning or polishing	
D. <i>Electro-plate</i>	As for table silver	As for table silver
E. <i>Galvanized Iron</i>	<i>For cleaning</i> As for daily cleaning <i>For polishing</i> As for lead	As for daily cleaning
F. <i>Iron</i>	According to the protective coating	
G. <i>Lead</i>	<i>For cleaning</i> Hot soapy water Clean hot water Net cloth <i>For polishing</i> Paraffin Powdered bath-brick Rag or newspaper Two clean dry dusters	None
H. <i>Monel Metal</i>	No special cleaning or polishing	
I. <i>Oxidized Silver</i>	<i>For cleaning</i> Warm soapy water Clean warm water Net or flannelette cloth Clean dry linen cloth <i>For polishing</i> As for solid silver, or Impregnated cloth	None

OF WHITE METALS

Cleaning	Polishing	Notes
As for daily cleaning	(i) Polish the outside only with dry whiting applied with a rag (ii) Finish with two clean dry dusters	(a) Avoid the use of soda when cleaning aluminium (b) Never polish the inside of aluminium cooking or food utensils (c) Avoid the use of commercial polishing agents
As for table silver	As for table silver	Chemical solution method is ineffective with this metal
		The occasional application of white furniture polish helps to keep the metal in good condition
As for table silver	As for table silver	
As for daily cleaning	As for lead	
As for daily cleaning	(i) Polish with a paste of powdered bath-brick and paraffin, applied with: (a) Rag, <i>or</i> (b) Newspaper (ii) Finish polishing with either (a) A clean piece of newspaper, <i>or</i> (b) A duster	Use newspaper whenever possible. It is cheap and can be burnt after use
(i) If very dirty wash with warm soapy water, using a net or flannelette cloth (ii) Rinse in clean warm water (iii) Dry very thoroughly with the linen cloth	(i) As for solid silver, <i>or</i> (ii) Rub with an impregnated cloth	(a) Avoid washing unless absolutely necessary: otherwise the steel forming the foundation to the silver may rust (b) For the same reason as in (a) use an impregnated cloth for polishing

Metal	Apparatus required	Stain Remover
J. <i>Pewter</i>	<i>For cleaning</i> Hot soapy water Clean hot water Net or flannelette cloth Soft nail brush Clean dry linen cloth <i>For polishing</i> Home-made or commercial liquid pewter polish Methylated spirit Soft soap Silver sand	None
K. <i>Stainless Steel</i> (i) Cooking utensils (ii) Cutlery (iii) Ornamental	No special cleaning or polishing No special cleaning or polishing No special cleaning or polishing	
L. <i>Staybrite Metals</i>	No special cleaning or polishing	
M. <i>Steel</i> (i) <i>Cooking utensils</i>	<i>For cleaning</i> As for aluminium Sand <i>For polishing</i> As for ornamental steel	None
(ii) <i>Cutlery</i>	No special cleaning or polishing	
(iii) <i>Ornamental</i>	<i>For cleaning</i> Lubricating oil Hot soapy water Clean hot water Net cloth Newspaper Soft nail brush Linen cloth <i>For polishing</i> Steel wool Emery paper Two dry dusters	None

OF WHITE METALS (*cont.*)

Cleaning	Polishing	Notes
(i) Wash in hot soapy water, using a net or flannellette cloth, and the soft nail brush if necessary (ii) Rinse thoroughly in clean hot water (iii) Dry with the linen cloth	1. <i>Modern Pewter</i> Rub with methylated spirit applied with a rag, and finish with a clean dry duster 2. <i>Modern and Old Pewter</i> Polish with either (a) Home-made liquid polish, or (b) Commercial liquid polish Apply the polish with a rag and finish with a clean dry duster 3. <i>Old Pewter (only)</i> (i) Smear with soft soap (ii) Scour with fine silver sand (iii) Wash thoroughly (iv) Rinse thoroughly (v) Dry with a linen cloth	
As for aluminium Fine sand can be used as an abrasive in place of steel wool or Brooks's soap	As for ornamental steel	
(i) If very neglected or rusty smear with oil, and leave overnight or for several hours (ii) Wipe off the oil with newspaper (iii) Wash in hot soapy water, using the net cloth, and the nail brush if necessary (iv) Rinse with clean hot water (v) Dry with a net cloth, and then with a linen cloth (vi) Finish drying in a warm place	Polish with either (a) Dry steel wool, or (b) Emery paper, Finish by rubbing with dry dusters	<i>Storing.</i> See page 52 Emery paper can be bought in varying degrees of coarseness. The medium is most suitable for general use in a house

SPECIAL CLEANING AND POLISHING

Metal	Apparatus required	Stain Remover
N. Silver (i) Solid ornamental (ii) Table (This may be either solid silver or electro-plate)	As for table silver <i>For cleaning</i> As for daily cleaning <i>For polishing</i> Necessary polish Rags Dusters Plate brushes Chamois leather	As for daily cleaning

Cleaning	Polishing	Notes
As for table silver As for daily cleaning <i>Cleaning the inside of a silver teapot</i> Tannin which forms on the inner surface can be treated by filling the teapot with hot water to which a teaspoonful of either soda or borax has been added. Allow to stand until the water is cold, and then clean with a bottle brush and a cloth. If necessary repeat the process; finally rinse thoroughly and dry	As for table silver 1. <i>When using plate powder</i> (i) Mix the powder to a thin paste with a suitable liquid (a) Water (b) Ammonia, or (c) Methylated spirit (ii) Rub a little of the prepared paste on to each piece of silver to be polished. Use a rag: leave the polish to dry (iii) Rub off the polish with a clean, dry duster (iv) For engraved parts and between the prongs use a silver polishing brush (v) Finish with a selvyt duster or a chamois leather 2. <i>When using liquid polishes</i> (i) Shake the bottle thoroughly (ii) Apply the liquid with a piece of rag and rub hard (iii) Continue as in 1. 3. <i>When using an impregnated cloth</i> (i) Rub each piece of silver with the impregnated cloth (ii) Finish polishing with a selvyt duster or a chamois leather 4. <i>When using a chemical solution</i> (i) Place the aluminium into an enamel bowl, with a piece of soda the size of a large walnut (ii) Put in the silver, which should be in contact with the aluminium (iii) Pour over sufficient boiling water to cover the silver (iv) Allow the silver to remain in the solution for 5 to 10 min. (v) Take out the silver and rinse thoroughly (vi) Drain, and dry whilst still hot with a linen cloth (vii) Polish with a soft duster or chamois leather	Keep spoons and forks separate when washing, otherwise the forks will scratch the spoons Gloves may be worn when polishing silver to prevent the highly polished surface from becoming finger-marked <i>Polishes</i> 1. <i>Powders</i> (a) Home-made (page 341) (b) Commercial <i>These require mixing with</i> (a) Water (b) Ammonia, or (c) Methylated spirit 2. <i>Liquid</i> (a) Home-made (b) Commercial 3. <i>Impregnated cloths</i> These consist of flannelette soaked in a solution of whiting, jeweller's rouge, and an evaporating liquid. When dry the flannelette is thoroughly impregnated with the fine abrasive. The polishing cloths must not be washed 4. <i>Chemical solution</i> This solution is produced by subjecting aluminium to the action of washing soda and boiling water. Special sheets of aluminium known as 'Polivit' can be bought, or an old aluminium spoon, saucepan, or small saucepan lid can be used. This method is also known as the soda-aluminium method

SPECIAL CLEANING AND POLISHING

Metal	Apparatus required	Stain Remover
O. <i>Sheffield-plate</i>	As for solid silver	
P. <i>Tin</i> (i) Polished	<i>For cleaning</i> As for daily cleaning <i>For polishing</i> Whiting Water Rag Two clean dry dusters	As for daily cleaning
(ii) Unpolished	As for daily cleaning	
Q. <i>Zinc</i>	As for galvanized iron	

OF WHITE METALS (*cont.*)

Cleaning	Polishing	Notes
As for solid silver	As for solid silver	
(a) As for daily cleaning (b) If very dirty the tin can be steeped in hot soapy water, and then boiled in clean soapy water (c) If greasy and very dirty, soda can be added to the soaking and boiling water	(i) Polish the outside with a paste of whiting and water, applied with a rag (ii) Finish polishing with two dusters	
(i) After soaking the tins should be boiled in soapy water. If greasy, soda can be added to both the soaking and the boiling water (ii) Continue as for daily cleaning	None	
As for galvanized iron		

Coloured Metals

- A. *Brass*. An alloy of copper and zinc, by varying the proportions of which a remarkable series of colours can be produced, varying from that of pure copper through yellow to dull white. Alloys containing 80 per cent copper very closely resemble gold in appearance, and have been given various names such as Dutch metal, Bath metal, Mannheim gold, and pinchbeck. This latter variety is named after Christopher Pinchbeck, a London clockmaker, who invented the metal in 1732. Dutch metal is a very malleable alloy consisting of 11 parts copper and 2 of zinc, which when beaten into thin leaves forms a cheap form of gold leaf. Brass is capable of taking a high polish, but tarnishes on exposure to air. The brilliancy of the surface can, however, be preserved if the metal is thoroughly cleaned and then lacquered.
- B. *Bronze*. An alloy formed of copper and tin in variable proportions. The use of this metal dates from remote antiquity but it is now chiefly used for decorative purposes.
- C. *Copper*. A metal which has been known to and used by the human race from the most remote periods. The earliest definite date regarding its use is approximately 3,500 years B.C.—but it is probable that copper was in use from a far earlier date. It takes a brilliant polish, and although not affected by exposure to dry air, on exposure to a moist atmosphere, containing carbonic acid, it becomes coated with a green basic carbonate (verdigris). This substance is also formed by the action of acetic acid on copper (or on metal alloys containing copper) producing a poisonous salt, copper acetate.
- D. *Gold*. An extremely heavy and very valuable metal with a characteristic yellow surface which is capable of taking a very high polish. In a modern house it is used for the making of small ornaments and for jewellery.
- E. *Gun-metal*. A type of bronze, formerly used for the making of cannon. The name is now applied to an alloy of copper and tin or copper and zinc.

TABLES

Metal	Apparatus required	Stain Remover
A. Brass		
(i) Cooking utensils	Hot soapy water Clean hot water Net cloth Saucepan brush, <i>or</i> Saucepan scourer Two clean soft dusters	Cut lemon
(ii) Lacquered	Two dusters	
(iii) Ornamental	As for lacquered brass	
B. Bronze	Two soft dusters, <i>or</i> A feather duster, <i>or</i> A fine hair dusting brush	
C. Copper		
(i) Cooking utensils	As for brass cooking utensils Soda	(a) Cut lemon for the outside (b) Fine steel wool, <i>or</i> Whiting for the inside
(ii) Lacquered	As for lacquered brass	
(iii) Ornamental	As for ornamental brass	
D. Gun Metal	As for bronze	

COLOURED METALS

Method of Cleaning	Rubbing up	Notes
(i) Soak in hot water (ii) Wash in hot soapy water using the net cloth, saucepan brush, or saucepan scourer (iii) Remove stains by rubbing with a piece of cut lemon (iv) Rinse thoroughly with clean hot water (v) Dry with the net cloth (vi) Finish drying in a warm place	Rub with a clean soft duster when perfectly dry	In modern houses used only for pre-serving-pans
Remove surface dust with two soft dusters	Rub hard whilst dusting	Nothing must be used for cleaning which will scratch the surface, and so spoil the lacquer
As for lacquered brass	As for lacquered brass	
Remove surface dust	Rub with a soft duster	Generally used for ornaments in the form of classical figures or equestrian statues
(i) Soak in hot soda water if greasy (ii) Otherwise soak in cold water (iii) Wash in hot soapy water, using a net cloth, saucepan brush or saucepan scourer (iv) Remove stains: (a) From the outside (b) From the inside (v) Rinse thoroughly in clean hot water (vi) Dry with the net cloth (vii) Finish drying in a warm place	Rub hard with a clean soft duster when perfectly dry	Must always be lined with tin
As for lacquered brass	As for lacquered brass	
As for ornamental brass	As for ornamental brass	

SPECIAL CLEANING AND POLISHING

Metal	Apparatus required	Stain Remover
A. Brass		
(i) Cooking utensils	<i>For cleaning</i> As for daily cleaning <i>For polishing</i> Powdered whiting Rag Two clean dry dusters	As for daily cleaning
(ii) Lacquered	<i>For cleaning</i> Clean dusters Warm soapy water Clean warm water Net or flannelette cloth <i>For polishing</i> Powdered whiting Rag Two clean dry dusters	
(iii) Ornamental	<i>For cleaning</i> Hot soapy water Clean hot water Net or flannelette cloth Soft nail brush Clean dry linen cloth Two clean dry dusters <i>For polishing</i> Commercial polish Rag Two clean soft dusters	Fine steel wool
B. Bronze	<i>For cleaning</i> Warm soapy water Clean warm water Net or flannelette cloth Clean dry linen cloth Two clean dusters <i>For polishing</i> Sweet oil Rag Two clean dry dusters	

OF COLOURED METALS

Cleaning	Polishing	Notes
As for daily cleaning	(i) Rub with dry whiting applied with a soft rag (ii) Finish with two clean soft dusters NOTE. Dry whiting produces a very much better polish than does a paste of whiting and water	The outside only is polished No commercial polishing agent must be used for pans or any other vessel which may contain food
(i) Dust thoroughly (ii) Wash in warm soapy water, using the net or flannelette cloth (iii) Rub the surface with a piece of cut lemon—the acid counteracts the dulling action of the soap (iv) Rinse thoroughly in clean warm water (v) Dry with a soft clean linen cloth	(i) Rub with dry whiting applied with a soft clean rag (ii) Finish with two clean dry dusters (iii) Engraved, chased, or ornamental parts can be brushed with a soft brass polishing brush to remove the superfluous powdered whiting	No substance such as a commercial polishing agent or abrasive which may spoil the lacquered surface must be used for either the cleaning or the polishing of lacquered brass
(i) Dust thoroughly (ii) Wash in hot soapy water, using the net or flannelette cloth (iii) If necessary brush with the soft nail brush (iv) Remove any stains with Brooks's soap (v) Rinse thoroughly in clean hot water (vi) Dry with the clean dry linen cloth	(i) Apply the commercial polish by means of a rag. Rub in thoroughly (ii) Finish polishing with two dusters and use a brass polishing brush if necessary for crevices	Gloves may be used to avoid finger marks on the polished surface The screw cap must always be kept in place on tins of commercial polish to prevent evaporation
(i) Dust thoroughly (ii) Wash in warm soapy water, using the net or flannelette cloth (iii) Rinse very thoroughly in clean warm water (iv) Dry with the clean linen cloth	(i) Apply a little sweet oil by means of a rag. Rub in thoroughly (ii) Finish polishing by rubbing with two clean dry dusters	

SPECIAL CLEANING AND POLISHING

Metal	Apparatus required	Stain Remover
C. Copper		
(i) Cooking utensils	<i>For cleaning</i> As for daily cleaning <i>For polishing</i> As for brass cooking utensils	As for daily cleaning
(ii) Lacquered	As for lacquered brass	
(iii) Ornamental	As for ornamental brass	
D. Gold	<i>For cleaning</i> Warm soapy water Clean warm water Soft nail brush Flannelette cloth Clean soft linen cloth <i>For polishing</i> Impregnated cloth, or Chamois leather Plate brush Clean soft duster	
E. Gun-metal	As for bronze	

OF COLOURED METALS (*cont.*)

Cleaning	Polishing	Notes
As for daily cleaning	As for brass cooking utensils	As for brass cooking utensils
As for lacquered brass	As for lacquered brass	As for lacquered brass
As for ornamental brass	As for ornamental brass	As for ornamental brass
(i) Wash in warm soapy water, handling very gently and using the soft flannellette cloth (ii) Chains may be gently brushed with a soft nail brush (iii) Rinse very thoroughly in clean warm water (iv) Dry with the soft linen cloth	(i) Rub very gently with the impregnated polishing cloth (ii) Finish polishing with a soft clean duster OR (i) Rub very gently with the chamois leather (ii) Brush with a soft plate brush if necessary (iii) Finish with a clean soft duster	Gold is used only for personal ornaments If used in conjunction with soft stones, e.g. pearls, turquoise, it should never be washed If used with hard precious stones, e.g. diamonds, sapphires, etc., it can be washed successfully. Very gentle and careful handling is essential

GENERAL RULES FOR THE CLEANING AND POLISHING OF ALL METALS

1. Protect the work-table and the surroundings before beginning to work.
2. Remove grease and dirt. This is generally done by washing with soap and water.
3. Remove tarnish with a suitable reagent. Rub well.
4. Use cloths suitable to the metal to be polished. A leather or a selvyt duster may be used for polishing the finer metals.
5. All traces of cleaning agents must be removed.

Daily and Special Cleaning and Polishing of all Metals.—See Cleaning Analysis, p. 42.

Metal Polishes

Metal polishes may be either (a) commercial; or (b) home-made. The former are far more efficient than the latter and are comparatively cheap to buy.

Polishes may be bought in the form of (a) a paste; or (b) a liquid. The former type should not be used, as a paste is more difficult to get rid of and so makes the polishing difficult.

Liquid polishes consist of mineral water suspended in solution of an organic acid, such as oleic acid, in paraffin oil. In some cases, however, a mixture of alcohol and water is used instead of paraffin. Ammonia, sodium carbonate, or soap are present in some of these preparations.

Constituents of Metal Polishes

1. Mineral matter:
 - (a) Finely powdered aluminium silicate.
 - (b) Calcium carbonate (chalk).
 - (c) Rouge (oxide of iron).
 - (d) Silica.
2. Liquids:
 - (a) Paraffin.
 - (b) Alcohol.
 - (c) Water.
 - (d) Ammonia.

The mode of action of metal polishes is partly of a mechanical and partly of a chemical nature. Oxides and sulphides of metals, which are produced on the surface of metals when they tarnish in the air, are usually readily soluble in acids, but it is essential that only such acid or other substance as is without pronounced action on the

metal itself, shall be used in a metal polish. Thus mineral acids are quite unsuitable for use in these preparations.

The object of the addition of paraffin oil or alcohol to these polishes is to facilitate the removal of grease from the surface of the metal.

The mineral matter is added to help in the mechanical removal of the tarnish, and in the production, by polishing, of the necessary smooth thin film of metal on the surface polished.

It is very important in using these polishes that none of the mixture be allowed to remain on the surface of the metal, otherwise re-tarnishing takes place very quickly.

CHOICE, CLEANING, AND CARE OF CUTLERY

Parts of a Knife

1. *The blade.* A long thin piece of steel, which is forged, tempered, hardened and finally ground. Sheffield steel is the best. Modern table cutlery is always made with stainless steel blades: but cooks' knives are nearly always made with ordinary steel blades.
2. *The tang.* A long thick piece of iron which is welded to the blade to form a small rod, and is fixed in the centre of the handle by means of cement.
3. *The rivet.* A short metallic pin or 'boat' which holds the tang and the handle together. It may be of wrought iron or of copper.
4. *The handle.* This may be of
 - (a) Ivory. Expensive and quickly turns yellow.
 - (b) Imitations of ivory, i.e. ivoride, celluloid, xylonite. (This is grained to imitate ivory.)
 - (c) Horn, from cows, stags, buffaloes. Very good and very durable.
 - (d) Bone. Suitable for general use.
 - (e) Wood. Suitable for kitchen use.
 - (f) Silver. For fruit.
 - (g) Mother-of-pearl. For fruit.
 - (h) Bakelite and similar chemical compounds used for tea-knives, picnic knives, etc. Very frequently dyed in bright colours.

Choice of Knives

1. The steel blades should be thin and smooth.
2. The steel should be good.

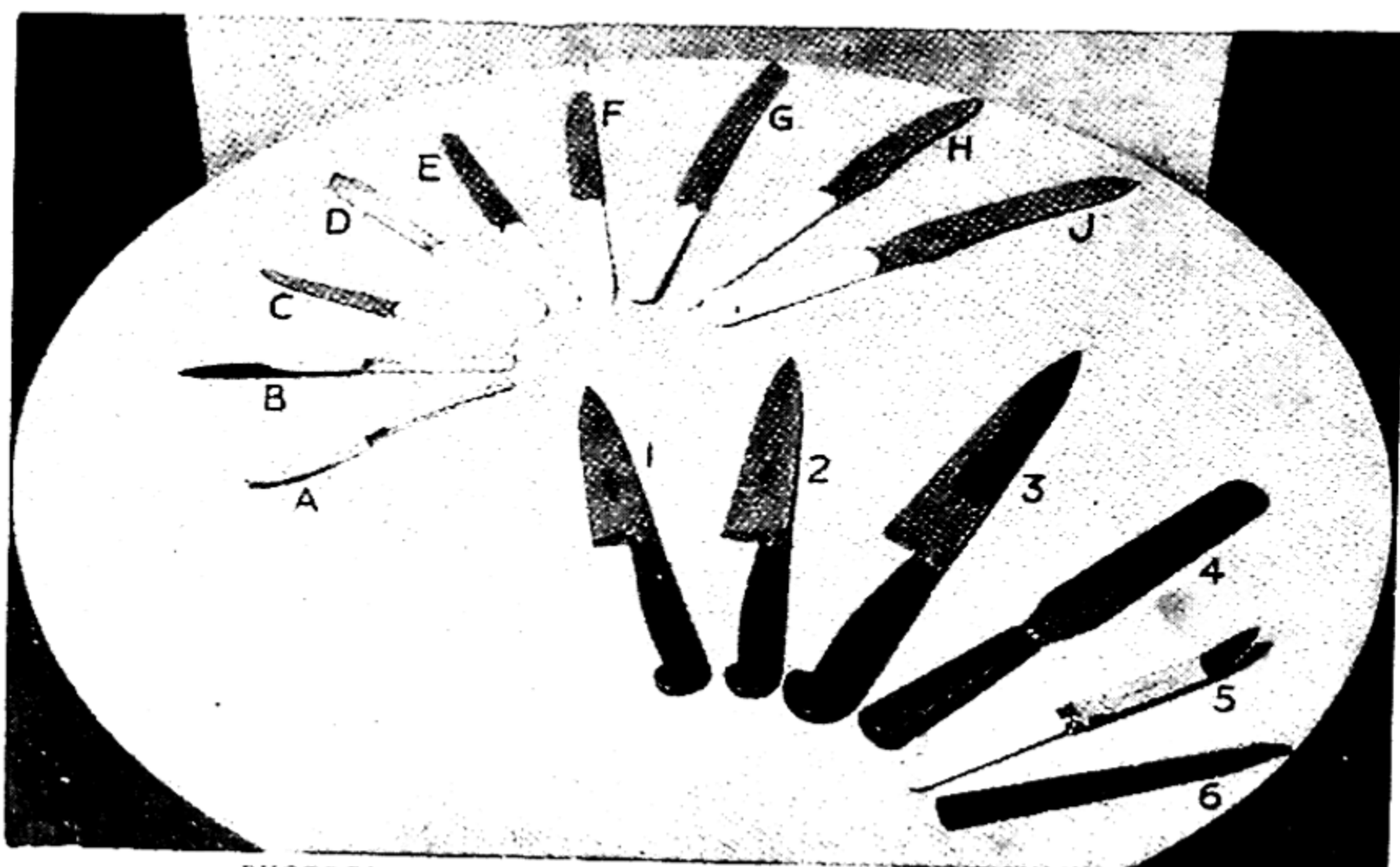
3. The knife should be well balanced, i.e. the blade should never rest on the table.
4. The handle should be made in one piece.

Daily Cleaning of Knives

See Cleaning Analysis, p. 28.

Polishing of Knives

Owing to the rapidity with which ordinary steel becomes stained, daily polishing is necessary to keep knives in good condition.



PHOTOGRAPHED BY COURTESY OF JOHN LEWIS AND COMPANY LIMITED

HOUSEHOLD CUTLERY

A. Silver butter knife; B. Mother-of-pearl handled fruit knife; C. Bakelite handled tea knife; D. Fish knife; E. Small (or cheese) knife; F. Large (or table) knife; G. Bread knife; H. Game carver; J. Meat carver.

1, 2, 3. Cook's or French knives; 4. Palette knife; 5. Grape-fruit knife; 6. Vegetable knife.

STORING AND CARE OF KNIVES

When in Use

Keep in the silversmith's case; in a baize-lined drawer; in a special knife-rack; or in a wooden or japanned tin knife-box.

When not in Use

- (a) Cook's steel knives should be thoroughly greased to prevent rusting. Use vaseline, sweet oil, or mutton suet.
- (b) Wrap tightly in brown paper, line with grease-proof paper. Reverse the handles and blades every third knife.
- (c) Tie up, label with kind and number.
- (d) Store in a dry place.

Stainless Steel Cutlery

This is very labour-saving, as the steel blades require no polishing. The knives are washed and dried in the usual way, and rubbed up with a clean dry duster. Originally stainless steel cutlery could not be made with the same sharp cutting edge as ordinary steel. At the present time that disadvantage is being removed and stainless steel knives can now be sharpened in the ordinary way.

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CHOICE, CLEANING, AND CARE OF METALS • NOTES

NOTES

✓ CHAPTER IV

CHOICE, CLEANING, AND CARE OF DIFFERENT TYPES OF COOKERS. CLEANING AND CARE OF KITCHEN UTENSILS

✓ KITCHEN ranges, cooking stoves, and cookers may be heated by

1. Solid fuel—which may be coal, coke, or anthracite coal.
2. Gas.
3. Electricity.
4. Oil.
5. Spirit.

✓ Solid Fuel Cookers

can be used for

- (a) Cooking.
- (b) Heating water.
- (c) Drying clothes.
- (d) Heating the room.
- (e) Assisting the ventilation of the room.
- (f) Heating plates and dishes.

✓ Costs of Fuel

This varies considerably, according to

- (a) The season of the year.
- (b) The amount of coal bought, e.g. whether in small or large quantities.
- (c) The type of coal bought.

✓ Choice of Cooker

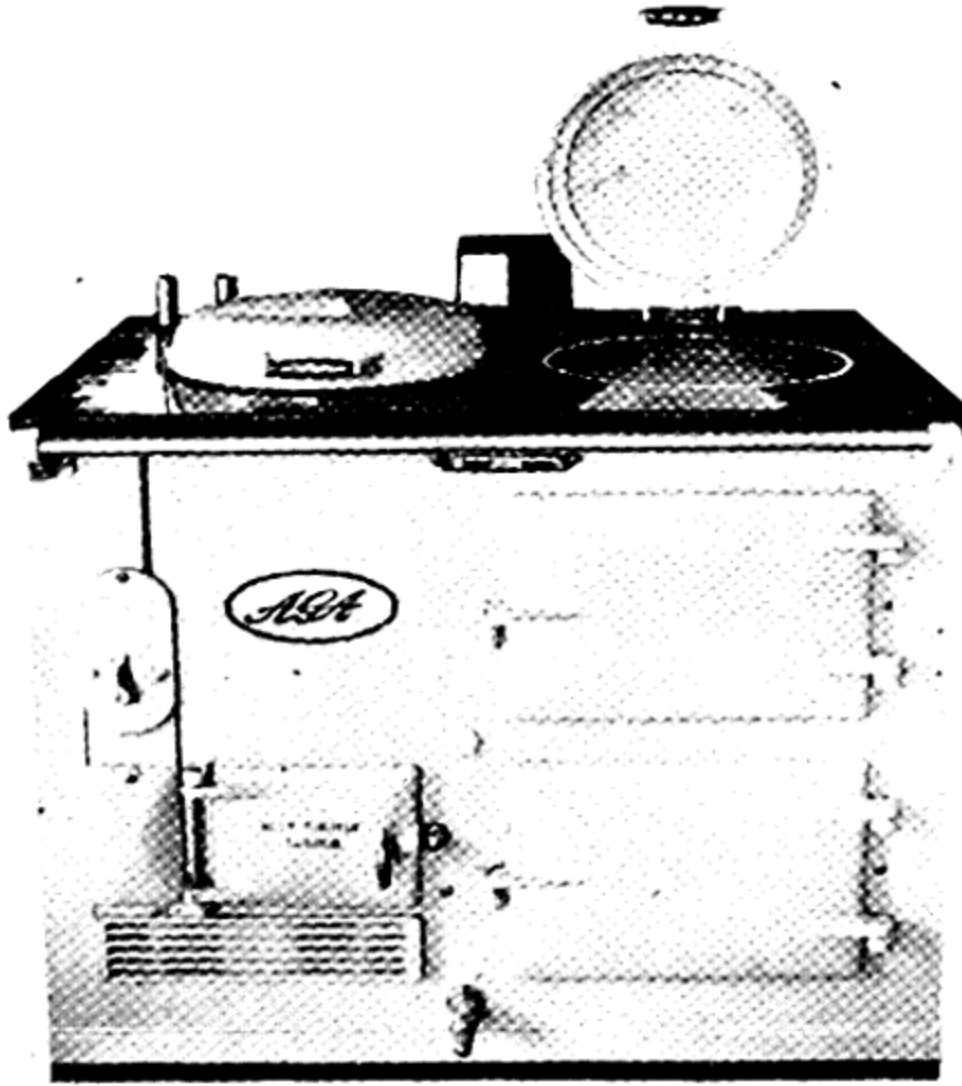
- (a) Consider its efficiency and durability.
- (b) Buy from a reliable firm.
- (c) Select a cooker of simple design and good material.
- (d) Select a size suitable to the kitchen and suitable for the average amount of cooking to be done.
- (e) Select a standard pattern so that parts can be easily renewed.
- (f) Have it carefully fitted. Brick flues are often unsatisfactory; iron flues are best.

✓ Types of Cookers

Considerable advances have recently been made in the design and

manufacture of these types of cookers; and solid fuel cookers can be broadly grouped as follows:

- A. *Heat-storage Cookers.*
- B. *Built-in Cookers.*
- C. *Portable type Cookers.*



AGA HEAT LTD

AGA COOKER

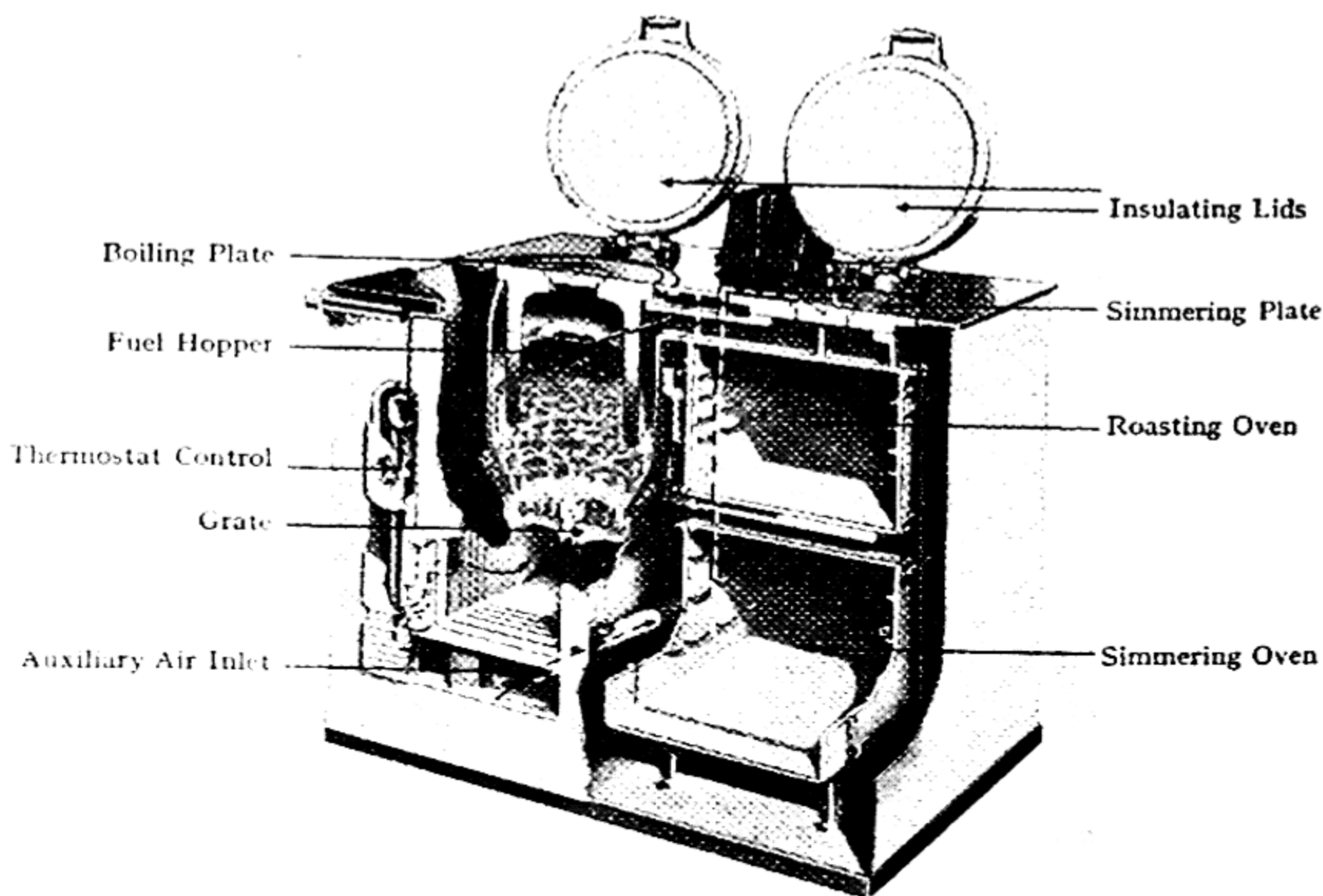
A. Heat-storage Cookers

The majority of solid fuel cookers now in use are of the heat-storage type, which are designed to give the maximum fuel economy. A small fire burning continuously heats up a large mass of iron situated inside the cooker frame, and the heat from this reserve store is used for cooking purposes. The cookers are very clean and easy to use: require fuelling only two or three times a day—depending on the fuel used and the amount of cooking done—and have the great advantage of burning day and night; heat is therefore readily available first thing in the morning or—in an emergency—during the night. As the cooker is heavily insulated it does not overheat the room.

All heat-storage cookers have heavy, insulated hot-plate covers, and when the stove is not in use it is absolutely essential to keep these in place, as if they are left up considerable wastage of heat occurs and the room may become uncomfortably hot.

The two earliest types of stored-heat cookers were

- (1) *The Aga*. Originally of Swedish invention, brought over to England in 1930, but now made in England by an all-British firm. The inventor of the cooker was a Dr Gustaf Dalen.



AGA HEAT LTD

AGA COOKER (SECTION)

- (2) *The Esse*. This is very similar to the Aga and is made in Scotland.

In addition to the above, many firms are now manufacturing heat-storage cookers of excellent design, but varying in cost and size. The construction and working of all these stoves is very similar, the principle being that of heat accumulation and storage.

Size of Cookers

This varies considerably—the smallest being suitable for a flat, and the largest for an institutional kitchen. The cookers are occasionally used in multiple units in very large kitchens.

Construction

- (a) The body of the cooker is of iron, coated with a thick layer of enamel, usually cream or white in colour.

- (b) Other metal parts are chromium-plated.
- (c) The cooker is insulated with asbestos in such a way as to keep the kitchen warm only. The room consequently never gets uncomfortably overheated.
- (d) On the top of the cooker are the boiling and simmering hot-plate surfaces, which are covered by thick, heavy, insulated lids, which should always be kept down except when the hot-plates are being used.



SMITH AND WELLSTOOD LTD

ESSE COOKER

- (e) The fire-box is of heavy metal, and by absorbing and storing heat from the small, continuously burning fire, acts as a reservoir of heat, which is thus always ready for instant use. In some models a thermostat is built into the fire-box door which by the judicious adjustment of the air intake can be used to control the burning rate of the fire.

In some models the bars at the bottom of the fire-box are shaken by a push-pull movement of a projecting rod, which enables the ash to be easily separated from the burning fuel. In other models the riddling is easily and quickly done with a poker. The ash falls into a removable ash-pan.

- (f) Ovens—there are always two, a roasting and a simmering oven: in larger models there may be four—roasting, baking, simmering, and one for plate-heating. In many models the ovens are all of the same size and the oven shelves are

58 CARE OF COOKING STOVES AND KITCHEN UTENSILS

therefore interchangeable. Oven thermometers are built into some oven doors.

- (g) Auxiliary ovens. For large-scale work an auxiliary oven can be fitted to the cooker. This is a 'slow' oven and provides useful accommodation for casserole cooking, and for keeping food warm.
- (h) Back panel of heavy gauge steel, enamelled to match the cooker.
- (i) Plate rack of cast iron, enamelled to match the cooker.

Cost

This can be divided into:

- (a) The initial cost of the cooker together with certain accessories such as roasting tin, baking tin, toaster, flue scraper, flue rake, coal hod, fuel filler funnel, ash shovel, a specially shaped handle for lifting out the heavy disk covering the top of the fire-box, and a wire brush.
- (b) Cost of fixing the cooker.
- (c) Cost of any extras such as an auxiliary oven or water heater.

Hire Purchase

Hire purchase terms can be arranged.

✓ Fuels used

- (a) Anthracite. When used a cooker will require refuelling twice and riddling twice in twenty-four hours.
- (b) Small coke. The cooker will require refuelling and riddling rather more often than when anthracite is used.
- (c) Other manufactured fuels such as 'Phurnacite.'

Refuelling

This is usually done two or three times daily, depending on the type of fuel used and the amount of work being done with the cooker.

✓ Cleaning

- (a) Enamelled surfaces: wipe with a wet cloth, use a cleaning paste or powder if necessary—e.g. after the roasting oven has been used. Rinse carefully with a clean wet cloth. Drying is not necessary as the cooker is always warm.
- (b) Chromium: rub up with a soft duster.
- (c) Hot-plate: rub with the wire brush.
- (d) Flues: these require sweeping periodically, the frequency being determined by the type of fuel used and the amount of work done by the cooker.

Cooking Utensils

For heat-storage cookers special cooking utensils with a dead flat base are essential, so that perfect contact can be made with the machined portions of the hot-plates. They are usually made of aluminium, but can also be made of cast-iron. 

Hot Water Supplies

Some heat-storage cookers are designed with a hot-water tank built into the unit, and by means of a tap on the front plate of the cooker sufficient hot water for kitchen use, e.g. washing-up, etc., can be obtained. Other water heaters are designed to be used independently, or can be installed alongside the cooker, but always with their own fire.

These hot water supplies from an independent heater may be used for

- (i) domestic purposes only—e.g. supplying hot water to baths, hand-basins, sinks, etc.
- (ii) domestic purposes and limited central heating. For this purpose the amount of hot water available for domestic purposes is less than in (i).
- (iii) central heating only. In this case the domestic supply would be heated by a completely different boiler.

✓ B. Built-in Cookers

A cooker of this type supplies cooking facilities and heats the room: it can also be provided with a boiler for hot water supply. In most cases the oven is at the side of the fire, but some small ranges have the oven above, completely secreted behind a canopy, so that the cooker is hardly distinguishable from an ordinary sitting-room fire.

✓ The Triplex Stove

In appearance this stove looks like an ordinary fire-place fitted in a living-room. There are various types, of varying sizes, and finished in different colours. The one fire heats

- (a) The room;
- (b) The oven;
- (c) The hot chamber for heating plates, dishes, etc.;
- (d) Hot water for baths and washing-up; and
- (e) Cooks food.

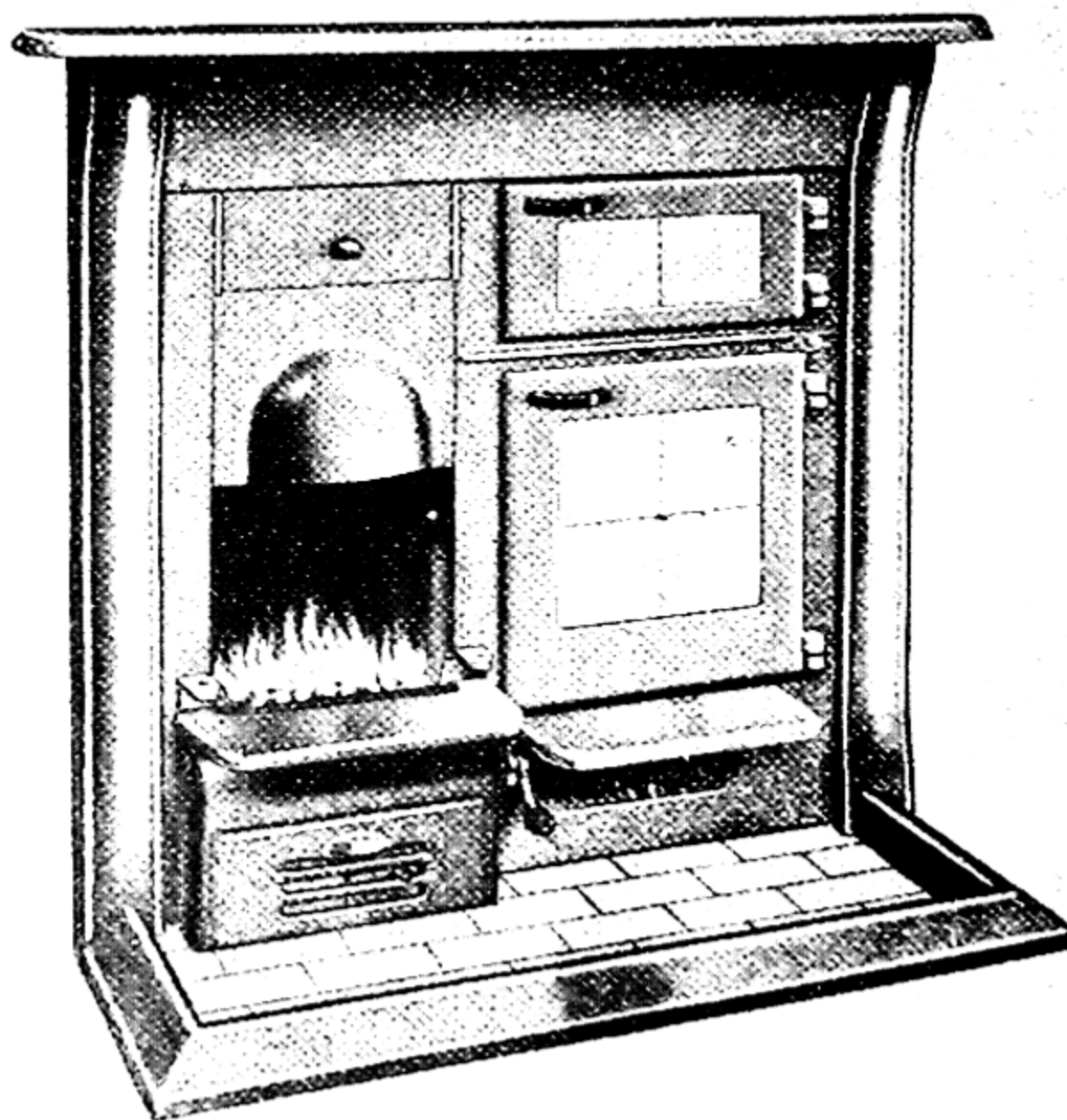
NOTE. Grilling is done under the oven. A special grilling tin, with a grid to fit, is placed there.

Cleaning

The daily and weekly cleaning is based on the cleaning of an ordinary kitchen-range.

Special cleaning implements are supplied with the stove:

- (a) Flue brush.
- (b) Flue rake.
- (c) Iron poker.



TRIPLEX FOUNDRY LTD

TRIPLEX GRATE

Back-to-back Cookers and Grates Combined

These fittings are constructed with a fire in the living-room, and a cooker back-to-back with it in the kitchen, scullery, or kitchenette, thus requiring only one fire, one flue, and one chimney. The cooker consists of an oven with three shelves, a hot-plate which can accommodate four 6-inch pans, and a plate rack. The heat is controlled and regulated by dampers.

The advantages of this type of cooker are:

- (a) All the cooking is done in a warm place.
- (b) The living-room remains clean and tidy.
- (c) No smell of cooking in the living-room.
- (d) Clothes can be aired in the kitchenette.
- (e) It is economical in time, labour, and fuel as one fire does the work of two fires.

This type of cooker is also designed with the addition of a hot tank connected with a cylinder, which provides hot water for sink, bath, and basin.

Another model has a laundry boiler in place of the hot-water tank; thus all domestic heating, cooking, and washing services are provided for by one fitment. The wash boiler is heated by a small independent fire enabling it to be used whether the living-room fire is lit or not. Only one flue and one chimney are required for all three types.

✓ **Portable type Cookers**, based on independent boiler design.

There are many cookers of this type, that is, non-bricked-in models with an oven at the side, which merely need connection to a flue. They are inexpensive, burn either coke or anthracite, and are available in attractive enamelled finishes. Many of them can be banked up and kept in overnight without any difficulty, so that they are ready for early breakfast cooking. Water-heating facilities can be combined successfully with this type of range if desired.

CLEANING AND CARE OF GAS COOKERS

✓ **Advantages of a Gas Cooker**

- (a) Labour saving. No fuel to be carried about.
- (b) Easy to clean. No flues, no dust, no smoke.
- (c) Very simple to use.
- (d) Cooler than a kitchen-range.
- (e) Takes up very much less room in a kitchen than an ordinary stove.
- (f) Inexpensive both as to
 - (i) Initial cost, and
 - (ii) Running costs. The exact amount of fuel only need be used.
- (g) Stoves can be hired, or bought on the instalment plan. Gas cookers are free of purchase tax.

Disadvantages of a Gas Cooker

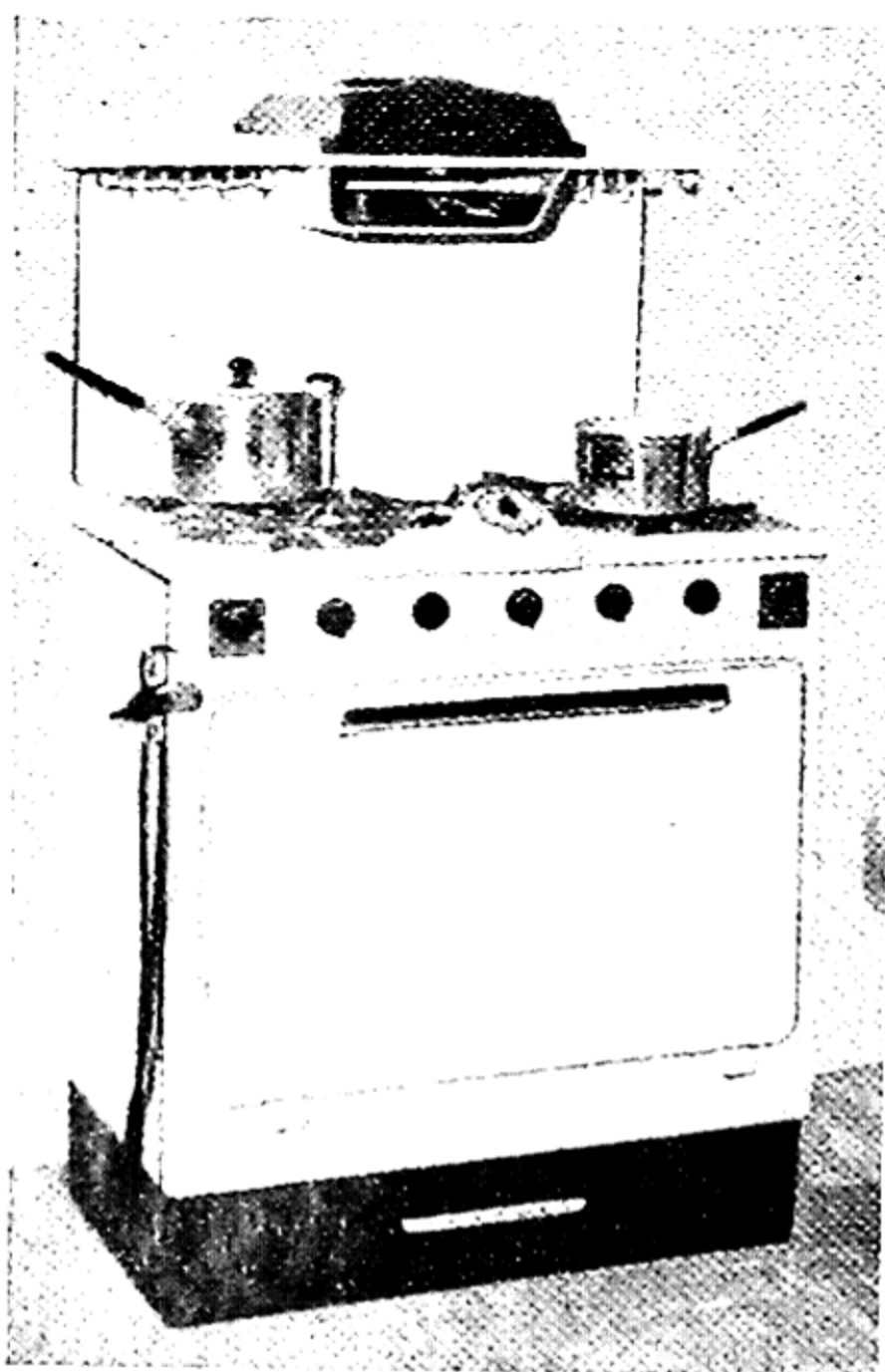
- (a) Cannot be installed everywhere, owing to lack of gas-supply.
- (b) Does not heat a water-supply.
- (c) Does not dry or air clothes very satisfactorily.

Costs

The cost of coal gas varies in different parts of the country. The cost of stoves varies in price according to size, type, etc.

Size of Cookers

A gas-ring is the simplest form of cooker but very large cookers are available for institutional use. These are fitted with a number of



THE GAS COUNCIL

GAS COOKER

burners of different sizes and various ovens. When space is limited small cookers consisting of two fast-boiling burners and a high-speed grill can be obtained. The hot-plate is covered with two cast-iron hot-plate sections in light-coloured vitreous enamel, and there is a short splash back.

A gas table has no oven.

Choice of a Gas Cooker

- (a) It should be suitable in size for the average amount of cooking required to be done.
- (b) The oven should be insulated, i.e. the sides should be packed with a bad conductor of heat, e.g. slag wool.
- (c) It should have an easily cleaned surface, e.g. enamelled.
- (d) It should be simple in construction.

Hiring of Gas Cooker

Gas cookers may be hired, the cost varying according to size, type, etc. The payments may be made monthly or quarterly.

Construction

1. *The body.* This is made of iron, the surface of which is protected by vitreous enamelling. This produces a smooth surface, which is attractive and easy to clean.
The door, back, and sides of the oven should be double, and should be packed with slag wool.
2. *Interior of oven.* This is enamelled and contains the burner, or burners, and shelf supports, which are easily cleaned embossings on the enamelled sides. In addition to two or three grid shelves, the oven 'furniture' may include a meat tin and cake tray, or, in older models, a deflector or browning sheet and a drip tin at the bottom. The oven burners are arranged in a single row at the back or a single row at either side.
3. *The hot-plate*, which is fixed to the body of the stove. It consists of an enamelled frame in which are fixed the various burners and grillers. It contains

(a) Enamelled hot-plate sections or pan supports. (b) Burners for both boiling and simmering. (c) Toaster or griller.	}	All these parts are movable.
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4. *Taps* which control the gas-supply are of various shapes, made from different materials, and should be so placed that they cannot be accidentally turned on or off.
5. *A movable sheet of enamelled iron* covers the top of the oven—the crown plate embodying a spillage trough.
6. *A slab of stone* should be kept under an old type of stove unless the floor is made of some fire-proof material, but modern cookers are quite safe on wooden floors.
7. *Splash back* consists of a sheet of enamelled iron. This is movable and is placed behind the top of the stove to protect the wall.
8. *Plate rack*, fixed to the enamelled splash back.

Modern Gas Cookers often possess

9. Thermometer.
10. Heat-proof glass door panels which allow the cook to watch the progress of roasting and baking without opening the door and so wasting heat.

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11. Fall-down doors or drop doors on which a roasting tin can be rested whilst a joint is being basted.
12. Folding cover top in place of a rigid plate rack, thus protecting the hot-plate and burners from dust and dirt.
13. Automatic lighting, e.g. the burners are ignited automatically by the turn of the tap.
14. A gas lighter on a flexible tube can be fitted. It is attached to the side of the cooker.
15. Extra large enclosed grill which gives high-speed grilling with economical fuel consumption.
16. Removable side extensions give extra 'stacking room' for cooking vessels on the hot-plate.
17. Eye-level grill. The food being cooked can be seen at a glance. In this model the raised oven provides space for a roomy drawer beneath the oven. This can be used either for the warming or storing of plates, dishes, etc.
18. Thermostatic control. The temperature of the oven is controlled by means of a thermostat. This consists of a brass tube enclosing an inner rod, and so arranged that when the temperature reaches the assigned degree the supply of gas is reduced, whilst if the temperature falls too low, as when the oven door is opened, the gas-supply is increased. By turning the head at the top of the thermostat, the initial position of the valve may be adjusted so as to vary the supply of gas to the burner for 'quick,' 'slow,' or 'moderate,' etc., temperatures, according to the nature of the cooking operations.

NOTE. Some models are designed with eye-level ovens which have a hot-plate at the side of the oven. These cookers take up more floor space, but are provided with useful storage racks or cupboards under the hot-plate and oven.

✓ Cleaning of a Gas Cooker

Daily Cleaning

1. Wipe over the whole stove with newspaper whilst the metal is still hot. If the oven has been used it should be wiped over also.
2. If grease has been spilt on the hot-plate or burners remove them, thoroughly scrub with hot, soapy, soda water, dry with a net cloth, and replace.
3. Wash, rinse, and dry the enamel sheet (crown plate).
4. Rub up any bright surfaces if there should be any, i.e. metal taps, etc.

Periodical Cleaning

NOTE. The frequency with which this is done depends on

- (a) the daily care,
- (b) the amount of cooking which is done on the stove.

1. Preparation

NOTE. No preparation of room is required, as there are no flues to clean.

- (i) The worker should wear an overall.
- (ii) Spread newspaper, or a hearth-sheet, round the stove.
- (iii) Take out all movable parts from the top and from the oven, observing carefully their correct positions.

2. Removal of Dirt

- (i) Clean all the movable parts according to the material. Rinse and dry, and finish drying either in the open air or in a warm place.
- (ii) Wash, rinse, and dry the inside of the oven thoroughly. If very greasy, or neglected, use 'Kleenoff,' a commercial preparation containing caustic. Follow the printed instructions carefully.
- (iii) Clean the enamel sheets.
- (iv) Attend to the outside of the stove, cleaning according to the material.

3. Clearing away.

- (i) Replace all parts.
- (ii) Test all burners by lighting the gas, and allowing it to burn for a few minutes. This also finishes drying the burners.
- (iii) Scrub the floor round the stove if necessary.
- (iv) Put away all the equipment and utensils used.

Care of a Gas-stove

- (a) Use perfectly clean saucepans.
- (b) Use light-weight saucepans, i.e. thin ones, such as enamelled tin or aluminium.
- (c) Use the size of burner most suitable for the purpose.
- (d) Do not allow the flame to escape round the outside of the pan.
- (e) Avoid boiling a kettle of water when a cupful only is required.
- (f) Use the whole of the heat of the oven.
- (g) Always turn off the gas before removing the pan.

Gas in Cylinders

If a main supply of gas is not available, cylinders of gas can be obtained. See page 302.

CHOICE, CLEANING, AND CARE OF ELECTRIC COOKERS

Advantages of an Electric Cooker

- (a) Electricity is the ideal cooking agent, because it produces no smell, dust, or smoke, and gives out a very even heat.
- (b) Not expensive if used intelligently.
- (c) Loss in the weight of joints is less when cooked electrically than if cooked by other means.
- (d) Quick and easy to use.
- (e) Very efficient.
- (f) The switches have three heats: low, medium, and high.

Disadvantages of an Electric Cooker

- (a) Can only be used in certain districts.
- (b) Can only be used when electricity can be obtained cheaply.
- (c) Does not heat a water supply.
- (d) Does not dry or air clothes very satisfactorily.

Construction

1. Modern electric cookers are finished with heat-resisting vitreous enamel to facilitate cleaning. The usual colours are white or cream; or two tones of cream, with a black or green hob; and with a dappled grey interior.
2. *The oven.* In most models the heating elements are arranged on either side and are thermostatically controlled, enabling a constant heat to be maintained automatically. Other models have the elements at the top or bottom. The interior of the oven may
 - (i) Be fixed.
 - (ii) Be removable **in one piece.**
 - (iii) Have removable sides and bottom.
 - (iv) Have removable element guards.
3. *The oven door* **may** be either
 - (a) Side opening.
 - (b) Drop-front which enables tins to be rested on it whilst food is being basted, etc.
4. *Oven accessories* supplied with a cooker include at least two grid shelves and a roasting tin.
5. *Grill.* This is common to most cookers. It is the same width and depth as the oven, and has a drop front door. An open element is fitted in the top immediately below a solid rectangular plate called the grill boiler, but it is uneconomical and

inadvisable to use the grill boiler independently of the grill. The standard grill equipment includes a grill pan with steel grid and an aluminium deflector plate.

6. *Boiling hot-plates.* There are two main types of boiling-plates:

(a) The solid.

(b) The radiant.

Although the latter type costs more, it has two advantages: it facilitates quick boiling, and does not require special ground-based utensils.

In most cookers, each boiling-plate is controlled by an individual three-way switch, but in some models the radiant type of boiling-plate is controlled by a 'simmerstat,' which gives complete temperature control, enabling the contents of saucepans to be boiled rapidly or kept slowly simmering.

7. *The hob.* This surrounds the boiling-plates and is so designed that it can be easily lifted for cleaning.

8. *Enamelled splash back* extending some 6-7 inches above the hob and protecting the surface of the wall behind the cooker.

9. *The cooker* may be mounted on either:

(a) A plinth.

(b) Legs.

NOTE. Plinth-mounted models very often have a drawer in the base, which may sometimes contain a low loading element for warming dishes and plates. It thus acts as a substitute for the plate rack which is found in gas cookers.

Automatic Time Switches

These are fitted in certain models and enable a previously prepared meal to be cooked at any specified time when the housewife may be absent from the kitchen.

Eye-level Cookers

It is possible to obtain electric cookers in which the oven is raised to eye level and the hot-plates and grill chamber situated alongside instead of above the oven. This arrangement takes up more floor space.

Miniature Electric Cookers

These range from

(a) Table models which perform all the functions of a standard cooker and are suitable for one or two persons, to

(b) Portable immersion heaters for boiling up small quantities of water or milk.

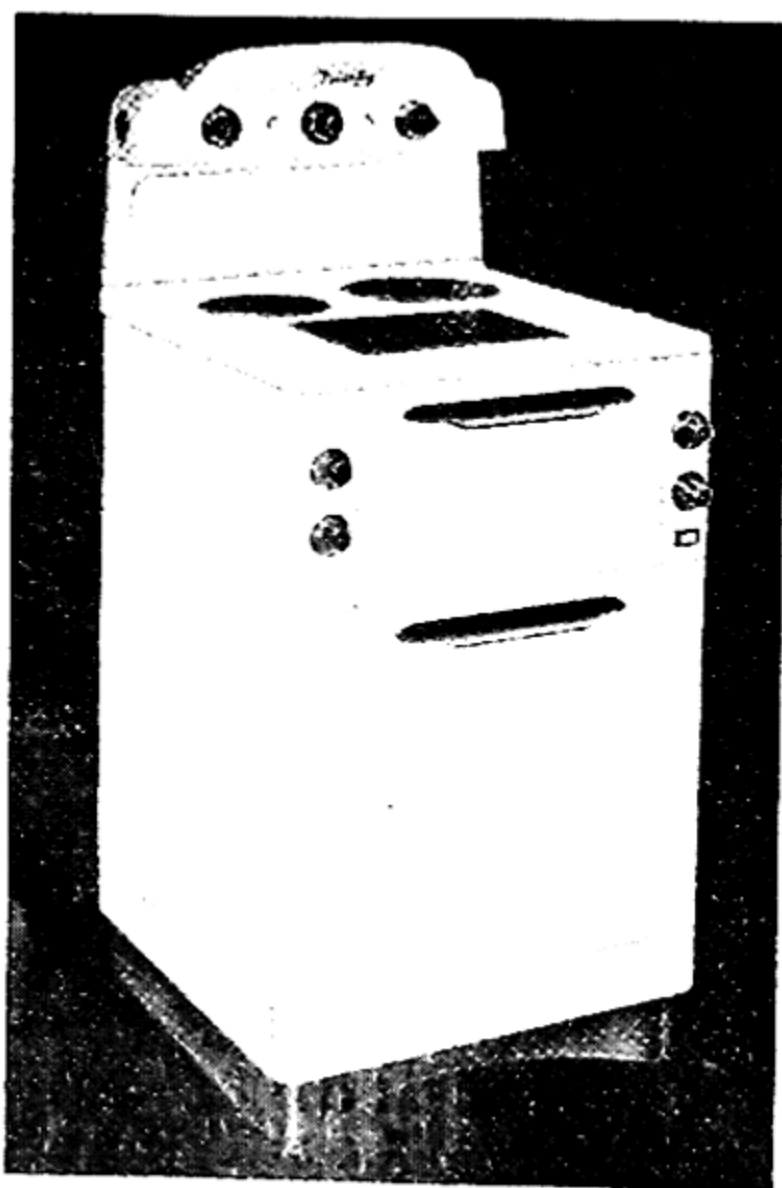
A very useful type of cooker consists of a round aluminium container having a tight-fitting lid with the element enclosed within the

lid. By strictly following the manufacturers' instructions small quantities of meats, cakes, pastry, scones, etc., which usually require an oven, can be cooked quite successfully.

✓ Cleaning an Electric Cooker

Daily

- (i) Turn off the current.
- (ii) Clean the cooker whilst it is still warm, as the heat will help to dry the stove after washing.



ELECTRICAL DEVELOPMENT ASSOCIATION

ELECTRIC COOKER

- (iii) Wipe over the metal plates with newspaper.
- (iv) Wipe over the enamel work, using a damp net cloth.
- (v) Remove the grill tray, wash and dry it.

Periodical Cleaning

- (i) This consists of a very thorough daily cleaning, to include the whole of the inside of the oven, and the outside of the cooker.
- (ii) The hot-plates can be rubbed with emery paper and then with a little oil, which will keep them black and prevent rust.

NOTE. Avoid touching the elements as they are fragile and very easily damaged.

- (iii) Wash the enamel work inside and outside the cooker with hot, soapy water. If very greasy use a little soda in addition.
- (iv) Remove stains by rubbing with a commercial cleaning powder. Rinse thoroughly and dry.
- (v) Wash the oven shelves, using hot soapy water, with the addition of soda if necessary. Rinse thoroughly and replace. ✓

Cost of Electric Cookers

Cookers may be bought outright or hired from the local Electricity Board. The rate varies with the size of the stove and its make.

A certain amount of wiring is supplied free, sometimes up to forty feet.

NOTE. An electric kettle for use on the stove may also be hired.

Points to be observed in the Use of an Electric Cooker

- (a) All saucepans must be quite flat, so that the whole surface comes into contact with the heating surface.
- (b) Bright-surfaced saucepans should be used, as these do not radiate the heat like black ones.
- (c) Use thin pans, to enable the heat to penetrate quickly to the contents of the pan.
- (d) Switch off the current as soon as possible, remembering that residual heat in an oven can be used from twenty to thirty minutes after the heat has been switched off.
- (e) Oven must be heated from ten to fifteen minutes before it is hot enough to be used.

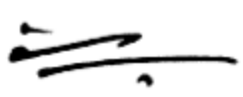
CHOICE, CLEANING, AND CARE OF OIL COOKERS

Oil Cooking Stoves may be of two types:

- (1) Those with a wick.
- (2) Those without a wick.

~ There are many well-known makes on the market, all of which can be bought in varying sizes.

Fuels used

- (a) Paraffin, obtained from shale, and coal-tar.
- (b) Petroleum, pumped out of the earth in various parts of the world. 

Cost of Fuel

The cost of good quality paraffin varies according to the quantity that is bought.

Advantages of an Oil-stove

- (a) Very useful where gas and electricity is not available or where a kitchen-range is old or badly fitted.
- (b) Much cooler in the summer: can be placed in the scullery, or wash-house if the kitchen is small.
- (c) Easy to manage.
- (d) The oil-consumption is usually very reasonable.
- (e) This method of cooking is considered at least 20 per cent cheaper than any other method.
- (f) Modern stoves can be obtained in various pastel colours.

Disadvantages of Oil-stoves

- (a) Very smelly if not cleaned regularly and carefully.
- (b) Time and labour required for daily and weekly cleaning.
- (c) The fuel is highly inflammable.

Choice of an Oil-stove

- (a) Buy from a reliable firm.
- (b) Buy a good stove; cheap ones are unsatisfactory and produce an unpleasant smell.

Construction

1. *The body.* This is made of strong tin, coated with japan (a black and glossy enamel).
 2. *The movable rings* are of cast-iron coated with enamel.
 3. *The oven* with one or two shelves, and with a glass panelled door, the glass being specially heat-resistant. The outside is finished with black enamel, with a vitreous-enamelled interior lining. Ovens to cover one or two burners can be bought.
 4. *A reservoir for oil*, with a gauge at one end to indicate the amount of oil in the reservoir.
 5. *Burners*, fed from the oil reservoir.
 6. *A plate rack.*
 7. *An enamel back panel.*
 8. *A stand for the stove.*
- } These are optional.

Cleaning*Apparatus required*

- (a) Metal tray, or box to hold all the special equipment.
- (b) Oil-can. Supply of paraffin.
- (c) Lamp-brush.
- (d) Newspaper, rags.
- (e) Leather.
- (f) Dusters.
- (g) Scissors.
- (h) Tissue-paper.
- (i) Bucket, net cloth.

Daily Cleaning

- (i) Always work in daylight.
- (ii) Turn up the wicks, and pinch off the charred parts with newspaper. Only use the scissors if absolutely necessary. Remove all dirt and charred wick from burner.
- (iii) Polish the chimney and replace.

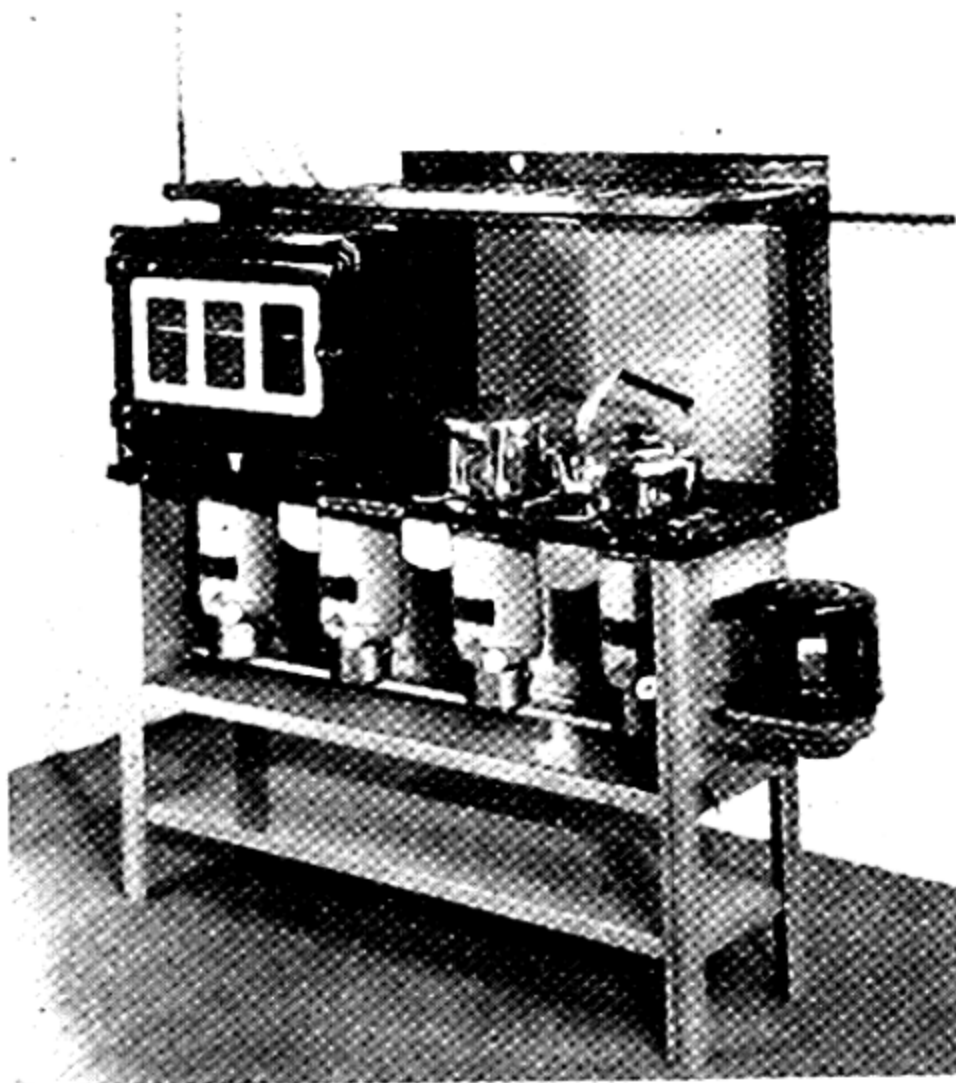
- (iv) Wipe the inside of the oven with a net cloth and hot soapy water.
- (v) Wipe over the body of the stove in the same way.

Daily Filling

Refill the reservoir two-thirds full; replace and rub over with newspaper or tissue-paper to remove any oil which may have been splashed on to the reservoir.

Periodical Cleaning

- (i) Place a piece of linoleum, newspaper, or an old enamel tray under the stove.



THE VALOR COMPANY LTD

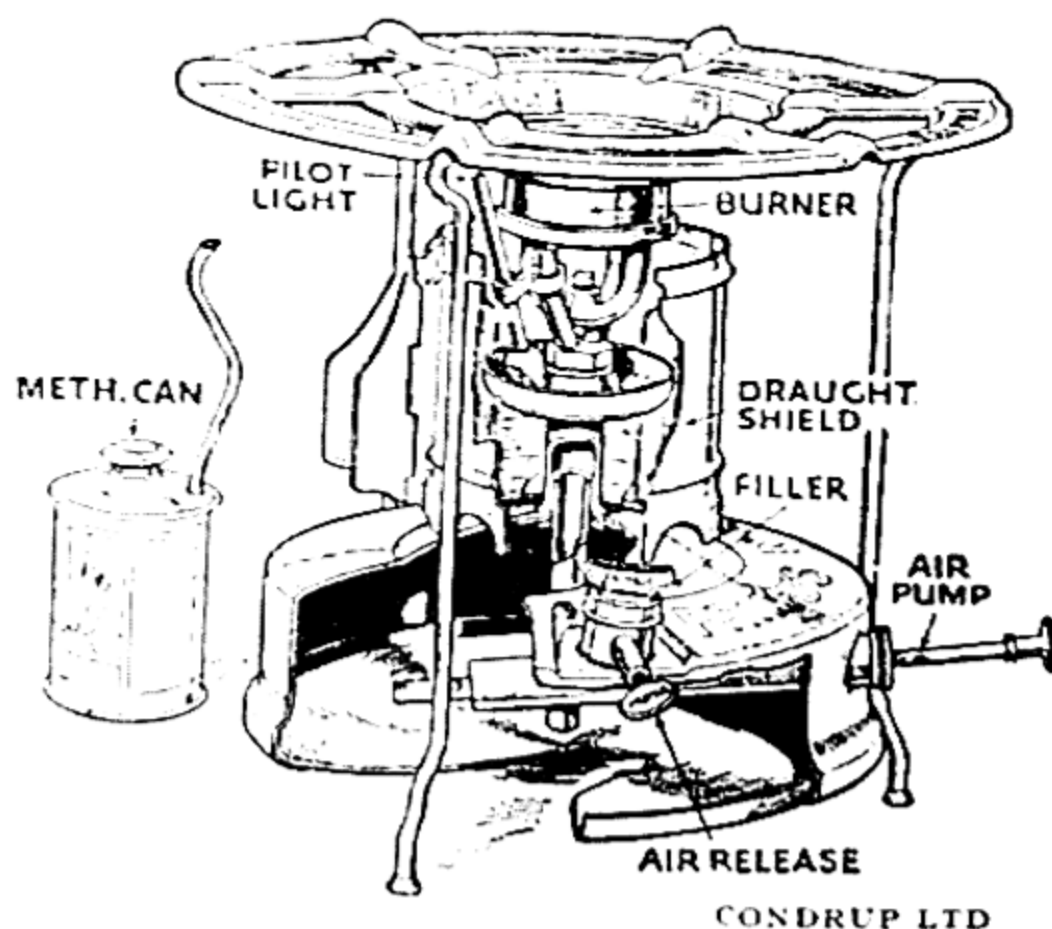
VALOR OIL COOKER

- (ii) Take the stove to pieces.
- (iii) Clean the burners thoroughly. Occasionally remove the wicks, putting them into an old basin kept for the purpose. Scrub the burners in hot soda water, using an old brush; rinse thoroughly and leave to dry.
- (iv) Empty the oil from the reservoir into a basin or jug kept for that purpose. Leave about one tablespoonful of oil in the reservoir and use to rinse out the sediment in the bottom of the reservoir. Throw away this paraffin on to a gravel garden path, or on to coal.

- (v) Refill the reservoir, and polish the outside.
- (vi) Reassemble the burners.
- (vii) Wash the enamelled parts of the stove with hot soapy water, and dry with a net cloth.
- (viii) Wash the inside of the oven.
- (ix) Polish the outside of the stove with a little paraffin.
- (x) Polish any other metal parts.
- (xi) Reassemble the whole stove.
- (xii) Put away all cleaning equipment.

To Light the Burners

- (i) Light the wick along its entire length. Turn down quickly, replace chimney in position, then slightly raise the wick.
- (ii) Watch for a time to regulate the wick and prevent the lamp from smoking.



PRIMUS STOVE

Care of Oil-stoves

- (a) Keep very clean; trim the wicks, and refill daily.
- (b) Use good oil and never allow the oil to burn too low.
- (c) Place the stove out of draughts.
- (d) Use tin, enamel, or aluminium saucepans on an oil-stove. These are light in weight and conduct the heat well.
- (e) Allow extra time to heat the oven and for cooking generally.

CHOICE, CLEANING, AND CARE OF WICKLESS STOVES

Wickless stoves burn vaporized paraffin. The Primus stove is the best known.

Fuels used

- (a) Paraffin.
- (b) Kerosene. (Oil from bituminous coal.)

Construction

1. A reservoir for paraffin.
2. An air-pump and valve attached to the reservoir.
 - (i) The air-pump regulates the flame.
 - (ii) The valve extinguishes it.
3. A small cup fixed above the reservoir. This holds methylated spirit, which when lighted causes the burner to become hot, and the gas given off by the paraffin ignites. Thus the oil is converted into a gas and burns with a hot and non-luminous flame.
4. A very fine jet fitted up the centre of the cup.
5. A pump to regulate the air flow.
6. A valve, used to extinguish the flame.

 To use a Wickless Stove

- (i) Fill the tank two-thirds full with oil; screw on the cup.
- (ii) Fill the cup with methylated spirit, light the spirit, and, when nearly consumed, begin to pump.
- (iii) If the pumping is done too soon the burner is not sufficiently heated, and the oil does not pass through as a gas; this causes smoke and smell. If this happens, open the valve at once.
- (iv) If the spirit burns out before the burner has lit apply a match at the foot of the burner. If this fails, refill the cup with spirit and start again.

To increase the Flame

Pump two or three times occasionally to keep the flame at full pressure.

To extinguish

Open the valve and leave it open.

 Care of a Wickless Stove

- (a) Clean the burners daily; use the pricker supplied with the lamp to clean the jet.
- (b) Use a good oil.
- (c) Place the stove away from a draught.

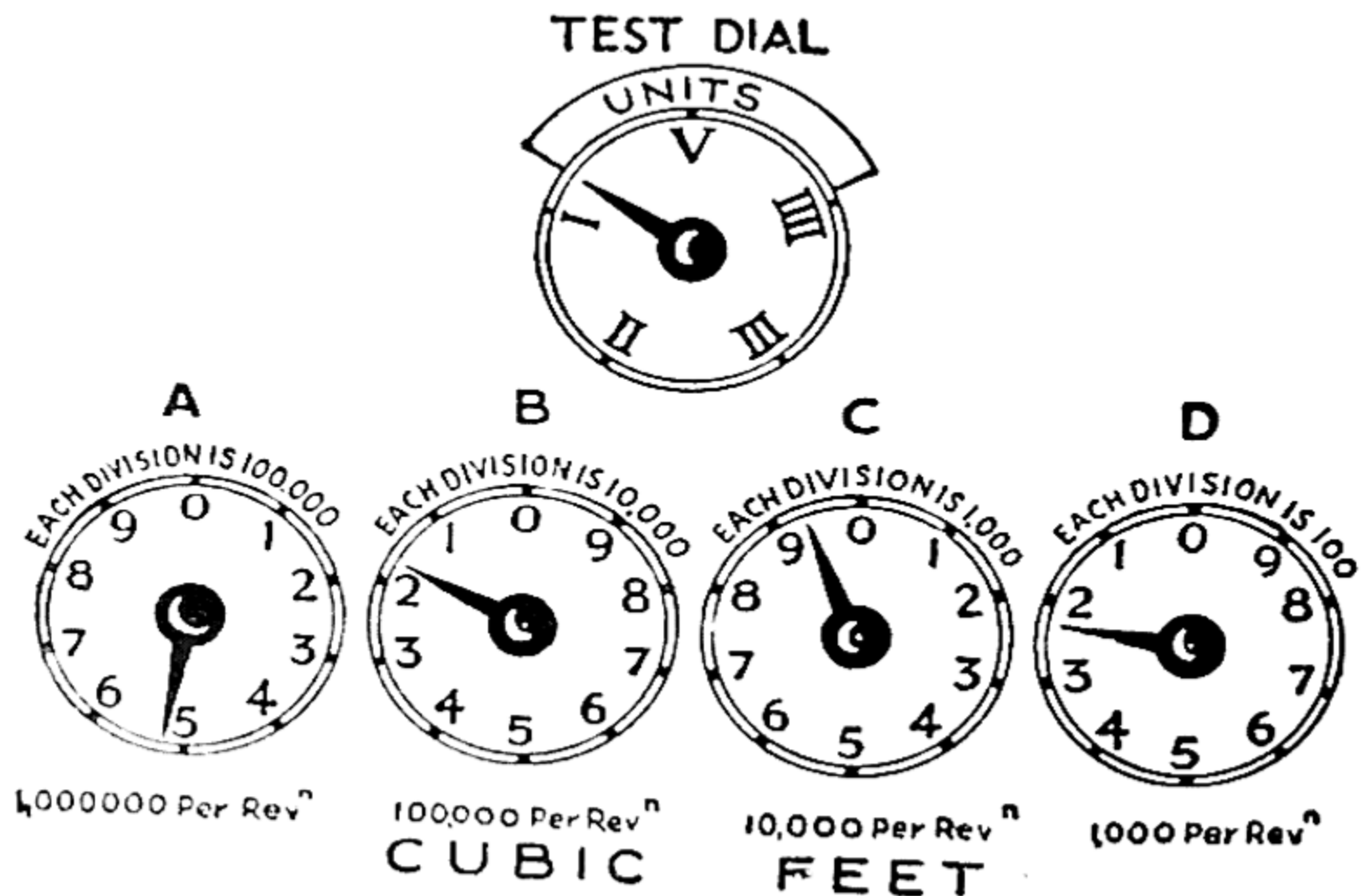
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Accidents

To extinguish burning paraffin smother the flame with a fire blanket, or throw sand, flour, sawdust, earth, or place a dustbin lid over the burning oil. Never use water, which will spread the burning oil.

Gas Meters

Uses. To record the consumption of gas by a given house or person. According to these ~~records~~ payment can be made.



THE DIALS OF A GAS METER

Position

- (a) It should be protected from weather conditions, and extremes of temperature.
- (b) It should be easily accessible.
- (c) It should be regularly read, and the readings noted. This will check waste and safeguard the householder against errors in accounts.
- (d) Access to the meter must be given and allowed at all reasonable times to the officials of the local Gas Board.

Hire

All meters are the property of the Gas Boards, and must be hired from them. The cost of hiring varies according to the size of the meter.

Construction

An iron box-like fixture, usually painted red or green, with inflow and outflow pipes. There are usually four (or more) faces or dials on the meter, with a very small dial above. This small dial is a 'test' dial, and has nothing to do with the record of gas consumed. Each dial has one hand, which revolves clockwise or anti-clockwise.

To read the Gas Meter

Start with Dial A and write down one after another the number which each hand has last passed, or which is immediately under the hand. Add two noughts and this will give the number of cubic feet of gas consumed and indicated by the meter. The small testing dial should not be taken into account when reading the meter.

Cost of Gas

This varies in different towns in different parts of the country.

Electric Meters

These are worked on the same principle, but are usually smaller in size than gas meters. Rent is not usually paid for electric meters.

CLEANING AND CARE OF COOKING UTENSILS

 **Baking tins.** See Cleaning Analysis, pages 30, 38.

Earthenware Casseroles

- (i) Steep in hot water if greasy, or in cold water if milky.
- (ii) Wash in hot soapy water, using a saucepan brush or saucepan scourer.
- (iii) If necessary clean the outside with
 - (a) Fine steel wool.
 - (b) Bath-brick and soap.
 - (c) Commercial cleaning powder and soap.
- (iv) Rinse and dry thoroughly.

NOTE. Avoid the use of soda which is apt to remove the glaze from the inner lining.

Enamel-ware

This type of saucepan is generally used for milk, white sauces, soups, etc.

Good saucepans should be bought, otherwise the enamel is liable to chip.

Cleaning of Enamel-ware

- (i) Steep in cold water to loosen the starchy foods, or in hot water if greasy.
- (ii) Clean with hot soapy water, using a net cloth or a saucepan brush.
- (iii) Remove stains with
 - (a) Commercial cleaning powder.
 - (b) Kitchen salt.
 - (c) Fine ash.
- (iv) Rinse thoroughly.
- (v) Dry with a net cloth.

Care of Enamel-ware

- (a) Avoid the use of sand, soda, or gritty cleaners.
- (b) Avoid stirring the contents of enamel saucepans with metal spoons.
- (c) Use only for white sauces, soups, milk, potatoes, etc.
- (d) Avoid allowing the pan to boil dry, or to burn.
- (e) Never use a knife for scraping.
- (f) Never use harsh saucepan scourers for cleaning.
- (g) Avoid knocking or banging the pans.

Frying-pans

These can be made of

1. Iron, lined with tin.
2. Tin, coated with enamel. This is a most unsatisfactory type of frying-pan, as the amount of heat required for frying causes the enamel to crack and chip.
3. Aluminium:
 - (a) Cast.
 - (b) Sheet.
4. Steel, lined with tin. Expensive, heavy, but very long lasting.
5. Stainless steel.

Cleaning of Frying-pans

- (i) Melt the grease and pour into a bowl for future use.
- (ii) Wipe the pan thoroughly with a pad of kitchen paper.
- (iii) Store carefully.

NOTE. Avoid cleaning with soap and water, except very occasionally.

Glass Cooking Utensils. See page 148.

Grillers and Meat-stands

Treat as for baking-tins.

Metal Potato-mashers

- (i) Steep in cold water to loosen the starch.
- (ii) Wash as for tins, but avoid the use of sand, bath-brick, commercial cleaning powder, or any other gritty substances.
- (iii) Rinse and dry thoroughly, using a net cloth, and finish drying in a warm place.

Mincing-machines

- (i) Take all the parts to pieces.
- (ii) Remove all food with a fork.
- (iii) Scrape if necessary, and wash in hot, soapy soda water.
- (iv) Finish drying in a cool oven, or on a hot plate-rack.
- (v) Put the parts together, and store in a cupboard or in a drawer.

Omelet Pans

These have a round join between the sides and the base, and should be kept solely for the purpose of omelet making. They can be made from:

- (i) Copper lined with tin.
- (ii) Aluminium:
 - (a) Cast.
 - (b) Sheet.
- (iii) Steel lined with tin.
- (iv) Stainless steel.

Cleaning

As for frying-pans. To clean the inner surface heat the pan, sprinkle it with salt, and then wipe round with a piece of kitchen paper; this produces a clean, smooth surface.

Saucepans

These can be made of

1. Copper, always lined with tin.
2. Brass, sometimes lined with tin.
3. Iron, lined with
 - (a) Tin.
 - (b) Enamel.
4. Aluminium. This may be
 - (a) Cast,
 - (b) Sheet.
5. Tin, coated both inside and outside with enamel—the result is known as enamel-ware.
6. Steel.
7. Stainless steel.

Cleaning of Saucepans

Copper, brass, iron, aluminium, steel, and stainless steel. See Cleaning Analysis, pp. 26, 42.

Care of all Types of Saucepans

- (a) Use for the right purpose.
 - (b) Never allow to boil dry.
 - (c) Avoid banging on sink or stove.
 - (d) Clean correctly.
 - (e) Remove all stains.
 - (f) Never put away damp.
 - (g) Store on a saucepan rack or stand, or on a shelf, with the handle tilted up, or have a raised edge to the shelf to allow free ventilation.
- 

NOTES

Then dreams for fame while
women wakes for love.

CARE OF COOKING STOVES AND KITCHEN UTENSILS · NOTES

CHAPTER V

CHOICE, CLEANING, AND CARE OF FLOORS AND FLOOR COVERINGS

THE foundation of all floors, except those found in the basement of a house, consists of

Boards. These are laid on wooden joists, which may be the beams of the house and which separate the floor-boards of one room from the ceiling of the room below. The space between the joists requires ventilation, otherwise a form of dry rot will occur which will eventually cause the entire floor to crumble. With this ventilation, however, comes the inevitable draught which puffs up between the boards, and is not only very unpleasantly cold to the feet, but brings with it a load of dust as well. The architects and builders of a house never intend the floor-boards of an ordinary floor to be used without some further covering or finishing.

Basement floors are very often of the solid variety, i.e. concrete. They are often part of the foundation.

Floors are the most difficult of all surfaces to deal with, because they are so large in area and receive so much wear.

The ideal floor should be:

- (a) Absolutely smooth, and therefore easy to clean.
- (b) Absolutely level.
- (c) Durable in material and finish.
- (d) Suitable to the purpose of the room.
- (e) Warm for the feet.
- (f) Considered as the background for the rest of the decoration of the room.

SPECIALLY PREPARED WOOD FLOORS

These must be hard, of inconspicuous grain, and responsive to treatment and colour. The woods mostly used are: oak, pine, pitch pine, maple, beech, spruce. Walnut is sometimes used as a decorative border.

The wood may be laid in different ways:

- (a) In the form of narrow planks.
- (b) In the form of blocks, about 2 inches in thickness. This is a very durable form of wood flooring, and is frequently used in institutions.

- (c) In the form of parquet. The wood blocks vary in thickness, some being as thin as a quarter of an inch. The blocks are laid in pitch, and, because of their thinness, can be much more securely laid.
- (d) Plywood of oak or birch can also be used successfully for flooring. It can be laid in a variety of ways, and in varying sized pieces, which bring out the attractive grain of the wood, and provided the floor is cared for and polished regularly, such floors not only look attractive but are durable and practical.
- (e) *Composition Blocks*. Blocks resembling wood blocks but having a wider range of colours have been made for some time under proprietary names, from sawdust, cement, calcium carbonate, and drying oil. The blocks, which are $\frac{5}{8}$ inch thick, are laid in patterns like wood blocks but are bedded in cement mortar instead of bitumen.

Methods of Finishing Wood Floors

- (a) By polishing with a floor polish.
- (b) By staining and then polishing.

Floor Stains. See page 10.

Floor staining can be successfully accomplished by amateurs, the following polishes being most successful:

(a) *Permanganate of Potash*

2 oz. of permanganate of potash
1 pint of boiling water.

Method of making

- (i) Dissolve the permanganate of potash in the boiling water and stir very thoroughly.
- (ii) Allow to become quite cold before using.

(b) *Logwood chips*

$\frac{1}{2}$ lb. logwood chips
1 quart of water

Method of making

- (i) Stew the chips in the water until all the colour has been extracted.
- (ii) Stir well and strain.
- (iii) Use whilst hot.

(c) *Commercial Stains*

These vary in colour, cost, and efficiency. Avoid commercial

60
100
300
150
70
110
50
120

preparations which contain varnish, as this causes the stain to chip off and leaves a surface which is very easily scratched.

Preparation of Wood Floor for Staining

- (i) Sweep the floor thoroughly.
- (ii) If very rough the wood must be rubbed over with glass paper, or be planed, and all nails must be removed or hammered in.
- (iii) Sweep the floor to remove all pieces, etc.
- (iv) Scrub the floor and allow to become perfectly dry.

Staining a Wood Floor

- (i) If a surround only is to be stained, mark this out, plus 3 to 4 inches extra on all sides. This allows for any movement of the carpet.
- (ii) Apply the stain with a brush, or with a pad of cloth tied over the end of a piece of stick.
- (iii) Allow the first coat of stain to become perfectly dry.
- (iv) Apply a second coat of stain if necessary, and allow to become perfectly dry.
- (v) Rub with linseed oil, and leave for 24 hours.
- (vi) Finish the surface by polishing with a wax floor polish.

NOTE. Never use varnish on a floor, as this scratches and chips off easily.

Floor-polishing Mops

There are a very large number of different kinds of mops on the market, and they vary in construction, price, and weight.

The O'Cedar Mop consists of a cotton mop-head fitted round a perforated triangular metal plate, into which can be poured O'Cedar oil which trickles through the perforations into the mop-head.

The Ronuk Polisher has a coco-nut fibre surface which acts as a dry scrubber and which can be covered with a duster held in place by metal clips.

Electric Floor Polishers. See page 138.

Floor Polishes

These may be commercial or home-made.

- (a) *Commercial.* There are a very large number of commercial floor polishes, varying in cost, composition, appearance, and efficiency. They may be bought either in paste or liquid form.

- (b) *Home-made*. The best of all home-made floor polishes is made from beeswax and turpentine. See Appendix, page 341.

LINOLEUMS

This type of floor covering is extremely popular and is found in practically all houses.

Advantages

- (a) Very smooth surface.
- (b) Very easy to keep clean.
- (c) Can be bought in a very large number of patterns and designs to suit all incomes and all forms of house decoration.
- (d) Can be bought in many qualities.
- (e) Can be used as a surround to a carpet, or to cover the entire floor.

Disadvantages

Cold, both in appearance and feel.

Composition

- (i) A foundation of canvas, protected by a coating of paint.
- (ii) The surface is a mixture of powdered cork, resin, linseed oil, and colouring matter. This is placed over the foundation in varying thicknesses, according to the quality of the linoleum.

Varieties

- A. *Plain*. Can be obtained in various artistic colours. The great disadvantage of this type is that it shows every footmark, but it is useful as a surround, or in a small room with rugs covering part of the floor.
- B. *Inlaid*. The colouring matter forming the pattern is taken right through the canvas foundation. It is excellent for hard wear as the pattern cannot disappear and it is obtainable in good colours and designs.
- C. *Printed*. This has the pattern printed on the surface only, consequently the pattern wears off in a comparatively short time and the linoleum very soon presents a shabby appearance, long before it is worn out. This variety should not be used on floors where there is much traffic.

Cork Linoleum. This is similar to linoleum but has a much larger proportion of cork in its composition.

Advantages

- (a) Warmer than linoleum.

- (b) Softer to the touch than linoleum.
- (c) Soft, artistic shades with a dull finish can be obtained.
- (d) It may also be used with the addition of rugs—being thus a cheaper form of floor covering than a carpet.

Oil Cloth. This is canvas covered with layers of pigments and linseed oil which is then painted. It is not durable, being thin and easily cracked, but it is cheap and useful in places where there is not very much traffic. It is frequently used for covering tables and shelves.

Choice of Linoleum and Cork Linoleum

- (a) Consider the use of the room.
- (b) Consider the decoration, colouring, and furniture in the room.
- (c) Buy the best that can be afforded.
- (d) Remember that the floor should form a background to the decoration of the room.

Buying of Linoleums and Cork Linoleums

Both are manufactured in varying lengths, generally two yards in width, or narrower; the latter may have a border on either side, suitable for use on stairs or in passages. *The price is always by the square yard.*

Underlays

Occasionally an underlay of felt, or paper felting, or one of the commercial products such as Linovent, is used underneath linoleum or cork linoleum.

Advantages of an Underlay for Linoleum

- (a) Gives additional warmth.
- (b) Gives additional thickness.
- (c) Helps to deaden sound.

Disadvantages of an Underlay for Linoleum

- (a) Slight increase in the initial cost of the floor covering.
- (b) By allowing the formation of an air-bubble, a 'spring' may be created, thus causing the linoleum to wear out more quickly.

Preparation of a Wood Floor for Laying Linoleum

- (i) The floor must be well ventilated, otherwise if there is any dampness, dry rot will set in.
- (ii) The floor must be prepared as for staining.

Laying Linoleum on a Wood Floor

- (i) If possible lay the linoleum *across* the floor-boards. This does away with the possibility of a seam in the linoleum coinciding with a seam in the floor-boarding.
- (ii) The linoleum must be cut slightly smaller than the floor to be covered, thus allowing for stretching, settling, and expansion.
- (iii) The seams must be firmly closed, and the pattern must be carefully matched.
- (iv) The linoleum must be allowed to settle and stretch for at least three to four weeks. After which it may be trimmed to the correct size of the floor.
- (v) Linoleum is fixed to wood floors by means of special headless tacks or $\frac{3}{4}$ in. wire brads.

NOTE. These special headless tacks hold the linoleum firmly to the floor-boarding, but also allow it to be taken up if necessary without the tacks tearing large holes in it.

Linoleum and cork linoleum may also be laid on stone or cement floors, such as are found in the basements of houses.

Preparation of a Stone or Cement Floor

Cleanliness and dryness are most important.

Laying Linoleum on Stone or Cement Floors

- (a) The linoleum is fixed to the floor by means of special fixatives and waterproof cements.
- (b) The work must usually be done by experts.

Cork Tiles

Cork tiles are prepared by moulding granulated cork bark into large blocks under pressure while heating to approximately 400° C. At this temperature the natural resins in the bark bind the granules together so that no additional binder is needed. The large blocks are then cut into smaller tiles of the required thickness, usually $\frac{1}{4}$ to $\frac{9}{16}$ inch. Because of the method of manufacture the tiles are different shades of brown according to the time of heating. The variation of shade which can be produced in a finished cork tile floor is generally regarded as an attractive feature.

Use of Cork Tiles

These can be used in halls, living-rooms, bedrooms, bathrooms, etc., and can be fixed to any flooring—wood, concrete, or stone. They are guaranteed not to shrink, swell, buckle, crack, or become loose.

Fixing

This is done by means of special cement and invisible nails.

Advantages

- (a) Non-slippery
- (b) Sound-proof

- (c) Warm
- (d) British made

Disadvantages

Somewhat expensive. The cost depends on the size of the room, situation of the house, thickness of the tiles, and the style of fitting.

CARPETS, RUGS, MATS, AND MATTING

Carpets were originally part of the fittings of an Eastern life where they were used for many purposes of a ceremonial or religious nature. Oriental pile carpets were rare in Western Europe before the sixteenth century, and they were originally used as table-cloths or wall-hangings, as it was not customary to spread carpets on the floor where they would have accorded ill with the habits of the domestic life of those days.

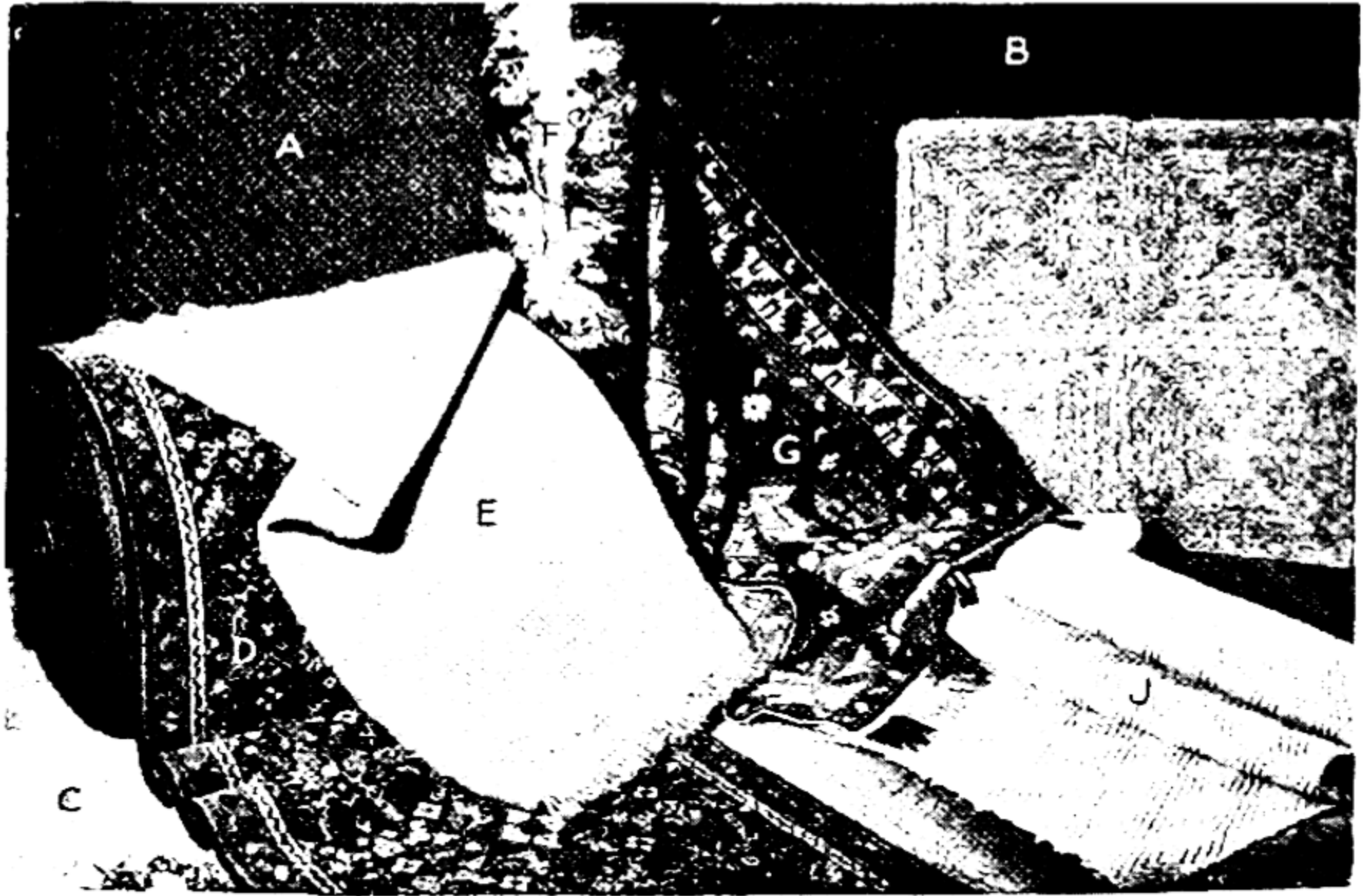
Carpets are manufactured or made by hand in practically all the countries of the world, and the production of carpets in any district implies a certain degree of civilization and luxury.

A. Hand-made Carpets

These are the oldest type, and are the historical parents of all modern carpets. They come mainly from the East: Egypt, Turkey, Persia, Syria, India, China, etc. They are characterized by exquisite colourings and designs. The dyes used are generally vegetable dyes—the material is usually hand-spun and hand-dyed, and the designs are the traditional ones which have been handed down from one generation of workers to another, and have existed because of their satisfying beauty of form and proportion.

B. Machine-made Carpets

The largest number of carpets produced in the world are machine-made products, and it is now possible to produce mechanically reproductions of all the hand-made varieties.



FLOOR COVERINGS

A. *Bordered speckled Axminster carpet*, B. *Plain Axminster carpet*; C. *Patterned Wilton carpet (covering floor)*; D. *Patterned Wilton stair carpet*; E. *Reversible bedside rug*; F. *Linoleum*; G. *Persian rug*; H. *Rush carpet*; J. *String rug*.

English Carpets. These include:

1. *Axminster.* A cut pile carpet made from woollen and worsted yarns used together. This carpet is produced in soft, rich colours and in rich designs. Royal or Imperial Axminster is the very best type. It is no longer made in the town of Axminster.
2. *Wilton.* A cut pile carpet of great durability. The fabric lends itself to fine and luxurious effects.

3. *Saxony Pile*. Similar to Wilton, but made from Saxony yarn, a different substance from the worsted yarns.
4. *Velvet Pile*. A fine carpet, not very suitable for hard wear.
5. *Kidderminster*. Somewhat thin and not very durable. Can be bought in reversible designs.
6. *Tapestry*. Woven squares, which are frequently reversible.
7. *Needleloom*. This modern type of carpet consists of a hessian foundation, the surface pile being 'needled' on to the foundation. More than one layer may be 'needled' according to the quality of the carpet. The back of the hessian is then coated with rubber solution, thus holding the 'pile' in place.

European Carpets

Brussels carpet was the first carpet to be made in Europe. It is a loop pile carpet of worsted yarn on a woven foundation of linen, jute, or cotton. The surface is ribbed and is rough and harsh to the touch. The colourings and designs are usually incredibly ugly.

Manufacture of Carpets

Materials used

A. *For the foundations*. Hemp, cotton, linen, jute, flax.

B. *For the pile*. Wool, cotton, silk, worsted yarns, mohair, cow-hair, horse-hair, rayon, and nylon.

Wool is ideal, because it can be spun into any required thickness, dyed to any shade, woven into any fabric, and yet retains its appearance and withstands reasonably hard wear. *Silk* is very beautiful, and possesses a wonderful sheen or gloss, but it becomes soiled very quickly and its high cost makes it a luxury.

Nylon. Durable, easy to clean, and suitable for all types of rooms. It is sometimes used with the addition of rayon.

All carpets are made with a strong foundation on to which is woven the pile, which may be cut or left uncut. Carpets are sometimes designated as 'cut pile' or 'loop pile' carpets.

Choice of Carpets

- (a) Buy the best possible quality. Cheap rugs and carpets are never an economy.
- (b) Buy carpets or rugs which are suitable in pattern, colourings, and make for their surroundings.
- (c) A plain or small-patterned carpet tends to make a small room look larger.

90 CLEANING AND CARE OF FLOORS AND FLOOR COVERINGS

- (d) Plain carpets may serve as a background to patterned rugs.
- (e) A carpet is part of the background of the room, therefore it should not be intense in colour. The wide expanse should harmonize with, and not dominate, the rest of the room.

Advantages of Carpets

- (a) They are warm in appearance and fact.
- (b) They help to deaden sound.
- (c) Their beauty of colour, texture, and design make them adaptable to any scheme of decoration and enhances the appearance of any room.

Disadvantages of Carpets

- (a) The initial expense.
- (b) They are rough surfaced and therefore difficult to clean.
- (c) They hold the dust and are therefore unhygienic.

Methods of using Carpets

- (a) Carpets may cover the entire floor of a room, being cut to the exact size and shape of the floor and fitting closely to the walls. This entails a certain amount of waste of material and in the past such a carpet was difficult to clean by means of brushing. Now, however, with the modern vacuum cleaners this difficulty is removed, and the method of covering the entire floor is returning, because it is silent, warm, and cosy.
- (b) Carpets may be woven into rectangles and placed in the centre of the floor.
- (c) Laid down the centre of a flight of stairs.
- (d) Laid down the length of a corridor.

Buying Carpets

Carpets are sold:

- (a) *By the yard*, the strips generally varying in width from 18 in. to 36 in. Strips of carpet are sewn together to form a rectangle of the size required. Patterned carpets are wasteful because of the matching of the pattern at the seams. Borders for edging carpets are also sold and vary in width.
- (b) *By the rectangle*, i.e. the carpet is woven in one piece and has no seams.

Preparation of Floors for Laying Carpets

As for linoleum and cork linoleum.

Underlays

These are often laid under carpets. They may be:

- (a) Felt. Usually brownish in colour.
- (b) Special moth-proof paper.
- (c) Sheets of old newspaper.
- (d) Sheets of brown paper.
- (e) Dunlopillo sponge-rubber underlay.
- (f) Old carpet.

Advantages of Underlays for Carpets

- (a) They give additional softness and warmth.
- (b) They increase the sound-absorbing quality of the carpet.
- (c) They prevent dust from passing into the back of the carpet.

Disadvantages of an Underlay for a Carpet

Initial expense.

An underlay must always be perfectly smooth and absolutely clean.

Stair carpets may have an underlay laid throughout the length of the stairs, or each step may be provided with a stair-pad.

Laying of Carpets

- (i) The floor surface must be perfectly clean.
- (ii) Avoid nailing down the carpet, unless absolutely necessary.
- (iii) The corners only need be fixed to prevent wrinkling.
- (iv) Any fixing of a carpet must be done by means of large brass-headed nails.

Care of Carpets

Carpets and rugs are subjected to greater wear and tear than any other household fabric. They are placed at the mercy of the feet of all who come and go, and suffer much from the constant moving of furniture over their surfaces, as well as from the traffic of foot-wear.

- (i) They must be properly laid.
- (ii) They must be carefully, regularly, and correctly cleaned.
- (iii) Constant exposure to strong sunlight should be avoided, as this causes fading and weakening of the fabric.
- (iv) Avoid dragging heavy furniture over carpets. Use castors or 'domes of silence' on the legs and feet of chairs, chester-fields, etc.
- (v) Before cleaning the fire-place cover the carpet in front of the hearth by means of a hearth-sheet or sheets of newspaper.

- (vi) The cleaning equipment to be used should be in perfect order and absolutely clean.
- (vii) Crumbs should be removed from the carpet after every meal.
- (viii) Stains should be removed as soon as possible after they are made.
- (ix) The tread of stair-carpets should be altered periodically, according to the amount of wear and tear given to the carpet.
- (x) Carpets should be turned round every year. This distributes the wear and tear more evenly. A square carpet lends itself more satisfactorily to this form of economy than does an oblong carpet.
- (xi) Attention must be paid to all edges, seams, etc., which should be strengthened and repaired when necessary.

Storing Carpets

- (i) Clean very thoroughly.
- (ii) Cover the right side with newspaper, and sprinkle with camphor balls.
- (iii) Roll up with the right side inside and tie the ends firmly with string.
- (iv) Examine the carpet carefully from time to time, renewing the camphor balls if necessary.

NOTE. A pole of wood is sometimes used, round which the carpet is rolled for storing purposes. Its use also enables a carpet to be more easily lifted from place to place, and does away with the possibility of the carpet being dragged, which may spoil the foundation of the fabric.

To Destroy Moth in Carpet

- (i) Cleanse thoroughly—working if possible in the open air.
- (ii) Place the carpet flat on a clean floor with the right side downwards.
- (iii) Wring out a cloth soaked in a strong solution of hot water and ammonia, spread over the carpet and apply a hot iron, until the cloth is quite dry.
- (iv) Work over the whole of the carpet in this way.
- (v) Finish drying the carpet in the open air if possible.

Rugs

These are small carpets, and are particularly useful in a house where extra warmth on the floor may be required, such as by a

writing-desk, or to fill an awkward piece of floor space, such as in a bow window, or to give protection to a carpet against excessive use, as in front of a fire-place.

Rugs may be hand-made or machine-made, and can be bought in a very large variety of colours and designs. They can also be reversible, or bought in plain colours. Avoid buying rugs the ends of which are finished with fringe, which very quickly becomes worn and untidy. The care and cleaning of rugs is exactly the same as that given for carpets, and owing to their convenient size they are very easily handled and moved.

Coco-nut Door-mats

These are made from coco-nut fibre, which is taken from the outer husk of the coco-nut. It is strong, durable, and inexpensive, and well fitted for hard wear. The mats are made with a strong back and a deep pile.

Coco-nut door-mats can be bought in brown and various other plain colours, in plain or checked designs, and can be obtained in all sizes.

These mats are essential for wiping boots and shoes on, and one should be placed at every external door. They should always be used, thus preventing much dirt from coming into the house.

Matting

These may be made of various materials, such as rush, grass, fibre, string, etc.

Rush Matting is chiefly of Eastern origin, either Japanese, Chinese, or Indian, but it is now also made in England.

Straw and Grass Matting is almost entirely imported from the East.

Coco-nut Matting. The coarse fibrous covering of the coco-nut is used for making matting, which can be obtained in different widths and colourings. It is very hard wearing, relatively light in weight, and reasonable in price. It is very suitable for laying on hard or uneven surfaces, and particularly useful for floors which are inclined to be damp.

Advantages of Matting

- (a) Very light in weight and inexpensive.
- (b) Very easily moved for cleaning.
- (c) Very useful in bungalows, summer holiday cottages, verandas, etc.
- (d) Can be bought in bright colours.

Disadvantages of Matting

- (a) Wrinkles very easily. This can be remedied by using large drawing-pins at the corners.
- (b) Being light, mats slide about very easily.
- (c) Rush matting is very much thicker than other types of matting, and because of its unevenness it is rather awkward in a room.
- (d) The porous nature of matting allows the dust and dirt to percolate through: it is therefore necessary to lift and shake it regularly and to sweep the floor underneath.

SOLID FLOORINGS

These are found in the basements and on the ground floor of houses. Very often the foundation of the house forms the floor of basement rooms and cellars.

Stone. This is cold, hard, but easily cleaned.

Concrete. Similar to stone, but gets very dusty, and is therefore suitable only for passages which are not greatly used. Can be given a coat of a hard-wearing paint-like preparation which is now available in a range of colours. It is applied by brush and should be allowed 24 hours or longer to harden.

Asphalt. Cold and hard. Generally used for out-houses, yards, and outdoor passages.

Cement. Cold, damp, and gloomy.

Tiles. These may be:

- (a) *Quarry Tiles.* These are tough and strong, and may be obtained in subdued colours of brick red, brown, buff, and blue. They wear excellently and look very bright and pleasant, especially when newly washed and polished.
- (b) *Coloured tiles,* with either a glossy or unglazed surface, are suitable for use in kitchens, bath-rooms, entrance-halls, and passages. They have a matt surface and may be obtained in a variety of colours. Unglazed tiles are durable and have a softer, warmer appearance than glazed tiles, but are rather more difficult to clean.

Advantages of Tiles

- (a) Clean.
- (b) Cool.
- (c) Easy to clean.
- (d) Very smooth surface—therefore germ-proof.
- (e) Non-inflammable.

Disadvantages of Tiles

- (a) Very cold.
- (b) Hard, and tiring to the feet.
- (c) Easily cracked and broken.
- (d) Dirt gets in between the tiles and the cracks.
- (e) Not always level.
- (f) Require frequent washing.

NOTE. Tiles are more useful and suitable as a surround to sinks, stoves, etc., than for covering an entire kitchen floor.

All the above solid floorings require some form of covering. In a kitchen rugs and mats of various types can be used, and in a passage coco-nut matting can be put down.

RUBBER FLOORINGS

This is a modern type of floor covering which is becoming increasingly popular.

Uses

- (a) *In private houses* it is used in cloak-rooms, bath-rooms, and lavatories.
- (b) *In institutions* it is used for stair-treads, corridors, entrance-halls, lecture-rooms, etc.

Cost

Owing to its increasing popularity, rubber flooring is becoming more reasonable in cost, and therefore well within the purse limits of the average housewife.

Types

- (a) Sheet-rubber.
- (b) Sheet-rubber laid on a foundation layer of sponge-rubber. This is very often finished with bevelled edges.

Advantages

- (a) Very silent.
- (b) Dust proof.
- (c) Easy to clean.
- (d) Very smooth surface.

Disadvantages

- (a) Inclined to be slippery. It is not a suitable floor-covering for kitchens, sculleries, etc., for this reason.
- (b) The initial cost may be high.
- (c) Difficult to lay.

Many forms of jointless floorings are now obtainable, and are particularly useful in rooms such as kitchens, sculleries, and cloak-rooms in private houses, and in offices, lecture-halls, classrooms, etc., in schools and universities, where the many disadvantages of ordinary wood-boarded floors are obvious.

Modern jointless floorings can be divided into two types:

- (a) Those which are laid hot to a thickness of $\frac{5}{8}$ — $\frac{3}{4}$ inch. The surface is smoothed and allowed to harden.
- (b) Those which are laid in the form of pre-cast tiles.

General Composition

The main ingredients are asphalt, bitumens, asbestos fibres, wood dust, in conjunction with binders of various types. Colour is added during the mixing of the ingredients, and is therefore thoroughly amalgamated and does not wear off.

Main Characteristics

- (a) Frequently much more resilient than ordinary tiles or cement.
- (b) Warmer than tiles or cement.
- (c) Obtainable in many different colours, plain, mottled, and marbled.
- (d) Often proof against damp, dry rot, and vermin.
- (e) Very hygienic because the surface is smooth, and therefore easily cleaned. It may be polished.
- (f) Very quiet.
- (g) Some are slip-proof even when wet.
- (h) Some are stain and scarproof: ink, iodine, and other common sources of stains have no effect, and burning matches and lighted cigarettes leave no permanent scar.
- (i) Owing to their composition they are fire-resistant.

Laying

- (a) Can be laid on any type of floor.
- (b) Many manufacturers employ special workers who are responsible for laying their own special flooring.
- (c) Special adhesives are used.
- (d) Time must be allowed for the floorings to harden, or to become bonded to the floor.
- (e) Coved side-pieces can be used, or the plastic substances taken up the sides of the walls for a distance of four to five inches.

Disadvantages

- (a) Cost. This varies according to the make, the method of laying, preparation of the sub-floor, the amount of flooring to be laid, and the position of the house, whether in a town or in the country, and whether far from, or near to a station.
- (b) Concentration of great weight may mar certain surfaces. This can be eliminated by fitting all furniture with special castors, gliders, or rubber 'shoes.'
- (c) Certain floorings deteriorate if in contact with large quantities of grease, as in a butcher's shop. The small quantities spilt in an ordinary kitchen would not make any appreciable difference.
- (d) Many of the floorings deteriorate if turpentine or polishes containing turpentine or its substitutes are used for cleaning or for polishing.
- (e) Some are spoilt if strong soaps, cleansers, or soda are used for cleaning.
- (f) The surface of some is spoilt if sweeping compounds are used on them.

DAILY CLEANING OF FLOORS

Type	Apparatus required	Cleaning
A. <i>Asphalt</i>	Old sweeping broom Old sweeping brush Old dustpan } Kept for outdoor work only	(i) Sweep the surface (ii) Collect dust into a dustpan, and burn the dust
B. <i>Boards</i>	Sweeping broom (long-handled) Sweeping brush (short-handled) Dustpan	(i) Sweep the floor, working towards the fire-place or the window (ii) Collect the dust into a dustpan (iii) Burn the dust
C. <i>Carpets</i>	Stiff carpet broom (long-handled) Dustpan Soft sweeping brush (short-handled) Stiff carpet brush for small areas such as stair-carpets, <i>or</i> A carpet sweeper, <i>or</i> An electric vacuum cleaner	Remove the surface dust by: (a) Sweeping gently, and collecting the dust into a dustpan. Burn the dust afterwards, <i>or</i> (b) Sweeping with a carpet sweeper. Work methodically and not too quickly, <i>or</i> (c) Using an electric vacuum cleaner. Work methodically, and do not move the cleaning nozzle too rapidly
D. <i>Cement</i>	As for asphalt	As for asphalt
E. <i>Concrete</i>	As for asphalt	As for asphalt
F. <i>Cork Lino</i>	As for polished wood, but no rubbing up is required	As for polished wood
G. <i>Linoleum</i>	As for polished wood	As for polished wood
H. <i>Matting</i> (i) <i>Coco-nut</i>	As for boards	As for boards
(ii) <i>Reed</i>	As for boards	As for boards
(iii) <i>Rush</i>	As for boards	As for boards
I. <i>Oilcloth</i>	As for polished wood	As for polished wood

AND FLOOR COVERINGS

Rubbing Up	Notes
None	Used for outhouses, paths, base-ments, etc.
None	Large areas of plain boarding may be sprinkled with one of the com-mercial or home-made sweeping compounds used to prevent dust from rising into the air. See Appendix, page 342
None	
None	
None	
None	
None	
As for polished wood	
As for polished wood	Oil-cloth, being thin, is very in-effective as a floor covering

Type	Apparatus required	Cleaning
J. <i>Patent Floorings</i>	Follow any special instructions issued by the makers, <i>or</i> As for tiles	Follow any special instructions issued by the makers, <i>or</i> As for tiles
K. <i>Polished Wood</i>	<i>For cleaning</i> Soft sweeping broom (long-handled) Soft sweeping brush (short-handled) Dustpan Dusting mop <i>For rubbing up</i> Polishing mop. This may be: (a) Hand worked (b) Electrically worked Two clean dry dusters for stairs or awkwardly shaped pieces of flooring Kneeling mat	(i) Sweep the floor (ii) Collect the dust in a dustpan, and burn afterwards NOTE. A dusting mop can be used for surrounds or for small areas of polished wood
L. <i>Rubber</i>	Soft sweeping broom (long-handled) Soft sweeping brush (short-handled) Dustpan Dusting mop	(i) As for boards (ii) A dusting mop can be used for surrounds or for small areas of floor
M. <i>Rugs</i>	As for carpets	As for carpets, <i>or</i> (i) Hang over a line in the open air (ii) Whilst on the line, beat with a carpet beater, or brush with stiff carpet brush, <i>or</i> (iii) Fold in half, and shake in the open air
N. <i>Stained and Polished Wood</i>	As for polished wood	As for polished wood
O. <i>Stone</i>	As for boards Hot soda water Kneeling mat Floor cloth	(i) As for boards (ii) If much used, the floor may have to be washed every day (iii) Wash with hot soda water, using the floor cloth (iv) Rinse and dry thoroughly with the same floor cloth
P. <i>Tiles</i>	As for stone	As for stone

AND FLOOR COVERINGS (cont.)

Rubbing Up	Notes
Follow any special instructions issued by the makers, or As for tiles	
Awkwardly shaped pieces of flooring or stairs may have to be rubbed up with two dusters	<i>Mops :</i> (a) <i>Dusting mops</i> Made of soft cotton and used only for the removal of surface dust (b) <i>Polishing mops</i> Used for the application and rubbing in of floor polish. Can be bought in a large variety of different shapes and weights. Never rub up under carpets or rugs
None	
	Soap should not be used, as it makes the stone slippery

Type	Apparatus required	Weekly Cleaning
A. Asphalt	As for daily cleaning Buckets of cold water Stiff yard broom	(i) Remove all surface dust (ii) Swill with cold water (iii) Brush with the yard broom
B. Boards	As for daily cleaning Bucket of hot water Kneeling mat Scrubbing brush Soap and soap dish Floor cloth	(i) Remove surface dust as in daily cleaning (ii) Remove dirt by scrubbing. See page 9
C. Carpets	<i>For weekly cleaning</i> Stiff carpet broom Dustpan Stiff carpet brush Soft sweeping broom Tea leaves should be well rinsed and squeezed dry, <i>or</i> Newspaper, dampened and torn into small pieces, <i>or</i> One of the commercial sweeping compounds An electric vacuum cleaner <i>For special cleaning</i> Warm soapy water Clean warm water Carpet soap, <i>or</i> ordinary yellow soap Floor cloth, <i>or</i> net cloth, according to the colour and texture of the carpet Ammonia, <i>or</i> vinegar Linen cloth for drying	<i>1. If to be brushed</i> (i) Prepare the room (ii) Prepare the carpet. Move as much furniture as is possible from the carpet, leaving a clear space (iii) Sprinkle the surface with (a) Well washed tea leaves (b) Newspaper, torn up and dampened (c) One of the commercial sweeping compounds. (iv) Brush the whole surface thoroughly, working towards the light. Brush the dust on to the surround, from which it can be swept into a dustpan (v) Turn up the edges of the carpet and thoroughly brush the wrong side <i>2. If to be vacuum cleaned</i> (i) No preparation of the room is required (ii) Move as much furniture as is possible from the carpet (iii) Thoroughly clean the right side, working methodically and not too quickly (iv) Clean as much of the wrong side as is possible
D. Cement	As for asphalt	As for asphalt
E. Concrete	As for asphalt	As for asphalt

FLOORS AND FLOOR COVERINGS

Weekly Polishing	Special Cleaning and Polishing	Notes
None	None	Wear strong shoes or rubber boots. Work towards a gully
	None	Various types of long-handled scrubbing brushes can be obtained which allow the scrubbing to be done in an upright position, thus saving considerable fatigue
	(i) Remove all dust. This may be done: (a) As in the weekly cleaning (b) By hanging the carpet over a line in the open air, and beating thoroughly on both the right and wrong sides (ii) Damp the surface with the warm soapy water, using a floor or a net cloth. (iii) Wash a small area at a time and work thoroughly (iv) Rinse thoroughly with clean water (v) Give a final rinsing with vinegar and water to revive the colours. Allow one tablespoonful vinegar to one quart water. Ammonia and water may be used to revive the colour if there is no blue in the pattern. Allow one tablespoon ammonia to one quart water (vi) Dry thoroughly with the linen cloth (vii) Finish drying by hanging over a line in the open air (viii) If the carpet cannot be dried in the open air, open the door and windows of the room and dry in a current of air. The carpet should not be walked on until thoroughly dry	The special cleaning is generally done during the spring months, when the carpet can be dried in the open air. Carpets may also be dry cleaned professionally <i>Commercial Sweeping Compounds.</i> See Appendix, page 342
None	None	
None	None	

WEEKLY AND SPECIAL CLEANING OF

Type	Apparatus required	Weekly Cleaning
F. <i>Cork Lino</i>	As for polished wood	(i) As for daily cleaning (ii) Avoid washing unless absolutely necessary. Use a linen cloth instead of a floor cloth
G. <i>Linoleum</i> (i) Inlaid (ii) Plain (iii) Printed	As for polished wood	(i) As for daily cleaning (ii) (a) If very dirty wash with warm soapy water, using a floor cloth. A soft scrubbing brush can be used if the linoleum is very dirty (b) If only slightly dirty wash with warm soapy water, using a floor cloth (c) Isolated spots can be rubbed off with paraffin
H. <i>Matting</i> (i) Coco-nut	<i>For weekly cleaning</i> Soft sweeping broom Soft sweeping brush Dustpan Electric cleaner <i>For special cleaning</i> Cold salted water Soft scrubbing brush Floor cloth	(a) Remove dust as in the daily cleaning, <i>or</i> (b) Remove dust by using an electric vacuum cleaner
(ii) Reed	<i>For weekly cleaning</i> As for coco-nut matting <i>For special cleaning</i> Warm soapy water Clean warm water Soft scrubbing brush Floor cloth	(a) Remove dust as in the daily cleaning, <i>or</i> (b) By using an electric vacuum cleaner
(iii) Rush	As for reed	As for reed
I. <i>Oil-cloth</i>	As for polished wood No special cleaning	As for polished wood

FLOORS AND FLOOR COVERINGS (cont.)

Weekly Polishing	Special Cleaning and Polishing	Notes
None	Rub over very occasionally with the special cream supplied by the makers of the cork lino. This protects and preserves the surface	A linen cloth should be used for washing cork lino, as an ordinary floor cloth leaves small bits all over the surface
As for polished wood	None	
None	(i) As for weekly cleaning (ii) Scrub on both sides with cold salted water (iii) Rinse thoroughly with clean cold water (iv) Hang in the open air to finish drying	This type of matting tends to fray very easily. Any necessary repairs should be carried out immediately. A piece of canvas should be placed on the under side and the strands stitched through separately on to the canvas.
None	(i) As for weekly cleaning (ii) Wash with warm soapy water, using the floor cloth (iii) If very dirty scrub with the soft nail brush (iv) Rinse thoroughly with clean warm water (v) Dry with the floor cloth (vi) Hang in the open air to finish drying	
None	As for reed	
As for polished wood	None	

WEEKLY AND SPECIAL CLEANING OF

Type	Apparatus required	Weekly Cleaning
J. <i>Patent Commercial Floorings</i>	Follow any special instructions issued by the makers or As for tiles	As for tiles
K. <i>Polished Wood</i>	<i>For weekly cleaning</i> Soft sweeping broom Soft sweeping brush Dusting mop Dustpan Warm soapy water Floor cloth <i>For weekly polishing</i> Polishing mop Floor polish Two dusters Rag Kneeling mat, for use on awkward-shaped parts of the floor <i>For special cleaning</i> Steel wool Turpentine, or Turpentine substitute	(i) Clean as for daily cleaning (ii) Remove mud marks by washing with warm soapy water using a floor cloth (iii) Dry thoroughly with a floor cloth
L. <i>Rubber</i>	As for polished wood No weekly polishing No special cleaning	As for polished wood
M. <i>Rugs</i>	As for carpets	As for carpets
N. <i>Stained and Polished Wood</i>	As for polished wood No special cleaning	As for polished wood
O. <i>Stone</i>	As for daily cleaning Scrubbing brush	(i) As for daily cleaning (ii) Scrub with hot soda water (iii) Rinse and dry thoroughly with a floor cloth
P. <i>Tiles</i>	As for stone	As for stone

FLOORS AND FLOOR COVERINGS (cont.)

Weekly Polishing	Special Cleaning and Polishing	Notes
As for tiles	As for tiles	After the laying and hardening of patent floorings special methods are sometimes adopted for the initial cleaning
Apply a small quantity of polish and rub in well with the polisher, or with two dusters	(i) Remove surface dust as in weekly cleaning (ii) Very occasionally the polished surface should be scrubbed with steel wool and turpentine, or turpentine substitute. This removes the waxed surface and with it any dirt which may have become embedded in the polish (iii) Polish as for weekly polishing, using a more liberal supply of polish	
None	None	
None	As for carpets	
As for polished wood	None	
None	If very neglected and dirty, soap may be used for occasional cleaning, but should be avoided unless absolutely necessary	
As for polished wood		Discretion must be exercised as to the advisability of polishing tiles, as it may make the floor dangerous

CLEANING AND CARE OF FLOORS AND FLOOR COVERINGS

NOTES

CHAPTER VI

CHOICE, CLEANING, AND CARE OF FURNITURE

CHOICE OF FURNITURE

1. Good taste should be the guiding principle in furnishing a house.
2. Avoid passing fads and fashions.
3. Buy furniture suitable to the size of the room.
4. Avoid buying too much furniture for one room.
5. Never make a decision hastily. Study catalogues from reliable firms—inspect model flats and rooms, etc., walk round shops and stores in order to study finished schemes, and to gain some idea of comparative values.
6. Good furniture can often be bought second hand.
7. If means are limited buy a little suitable and essential furniture and add to it by degrees.
8. Avoid ornamentation and try to get furniture made with plain and simple lines.
9. Avoid cheap imitations, or striving after handsome effects which cannot be achieved with the small sum at one's disposal.
10. Money should be expended to the best advantage from the points of view of:
 - (a) Good taste.
 - (b) Suitability.
 - (c) Purchasing power.

MATERIALS USED FOR FURNITURE

A very large variety of woods are used for furniture. Some because of their beauty of colouring, e.g. mahogany; some because of the high polish they will take, e.g. ebony and rosewood; some for their durability, e.g. oak and beech; and some are used merely as a framework, as in upholstered furniture.

A. Woods

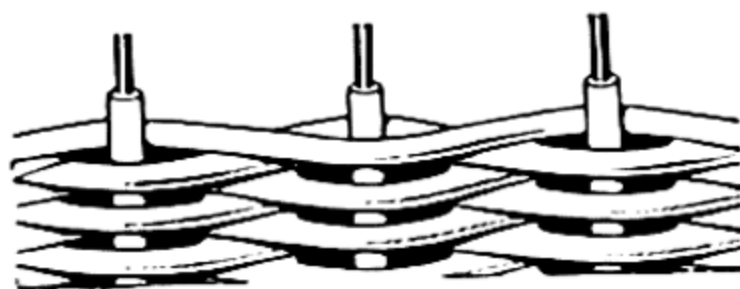
Methods of finishing Woods used for the making of Furniture

- (a) French polishing.
- (b) Wax polishing.
- (c) Staining.
- (d) Varnishing.
- (e) Painting with enamel, oil paint, or cellulose paint.
- (f) Fuming, i.e. exposing to the fumes of various acids, which cause the wood to take on a special coloration.

- (g) Treating in various ways to give an impression of antiquity.
 NOTE. Wood is often used in conjunction with other substances such as leather, cane, wicker, etc.

B. Wicker

This is a small, pliant willow twig, and in furniture making is woven round a framework of wood. This type of furniture is light, and not very durable, and has the great disadvantage of very quickly losing its shape and becoming shabby. Wicker may be white or brown.



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LLOYD LOOM

The sectional illustration shows the steel wire heart used in the fibre from which Lloyd Loom woven fibre furniture is made.

C. Cane

This is the stem of one of the smaller palms and is useful for the backs and seats of chairs because of its elasticity and pliability.

D. Rush

A marshy plant, also pliable and easily worked round a wooden framework.

E. Metal

Chromium, stainless steel, staybrite metals. This type of furniture has an austere appearance which makes it more suitable for use in offices, workshops, and institutions than in a house. It is extremely useful where special cleanliness is required, as in clinics, sanatoria, etc., or for places where chairs have to be frequently moved and stored away, as in schools, assembly halls, classrooms, etc.

F. Leather

Real leather is extremely expensive, and many of the modern imitation leathers are excellent substitutes at a very much less cost.

G. Rubber

This is used in two forms: (a) sponge-rubber, used for cushioning furniture, and (b) sheet-rubber, used in the form of strips which may be interlaced to form the backs and seats of furniture, or used as a foundation to cushioned seats as in chesterfields and in motor cars.

H. Upholstered Furniture

The foundation of all upholstered furniture is a wooden framework padded to produce the characteristic shape, and the padding covered with material to hold it in place.

Roem

Much of the modern upholstered furniture is made by fixing copper springs to the wooden framework—the copper springs being held in place by special upholstery twine and covered with scrim, a soft fabric used in upholstery work. On top of this layer of scrim is placed the padding, which should be thick enough to cover all the edges of the wooden framework and the edges of the springs. A layer of thin cotton lining fabric holds the padding in place. The materials used for padding are generally hair and wool, or coco-nut fibre and wool well mixed together. The final covering of the furniture may be one of very many different types of material, such as tapestry, damask, serge, moquette, velvet or velveteen, plushette, repp, leather or leather cloths.

In some upholstered furniture fine meshed wire-netting is used instead of the first layer of scrim, and is placed over the springs to form a foundation for the soft stuffing.

The latest development in the manufacture of upholstered furniture is the use of sponge-rubber in place of the horsehair and wool padding. The use of rubber cushioning is very hygienic, as it is dust-proof and germ-proof. All upholstered furniture should be fitted with castors or 'domes of silence' to enable it to be easily moved about without damage to the floor or floor covering.

Some modern upholstered furniture is mounted on turn-tables, which enable the chairs to be easily and quickly faced in any direction. The chairs can also easily be moved. Upholstered furniture is often bought with the intention of its always being covered with loose chintz or cretonne covers. In this case the furniture should be finished with a cotton lining cloth, which is very much less expensive than the usual materials such as repp, etc. The initial cost of the furniture is therefore lowered.

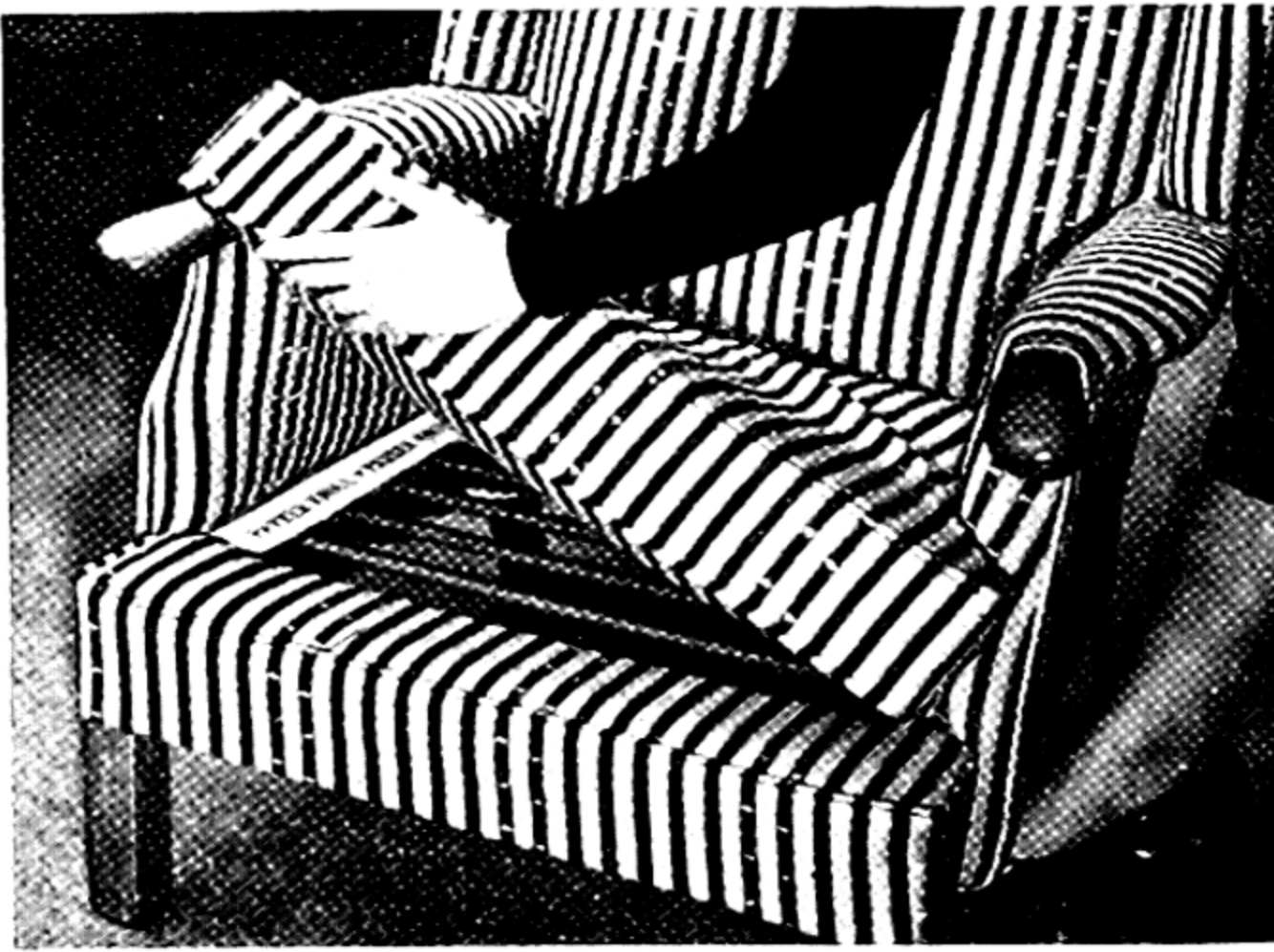
I. Plywood

Thin sheets of wood glued together under pressure. This has the advantage of being relatively inexpensive, and oak-faced plywood, for instance, is considerably cheaper than solid oak. Plywood is strong, does not warp readily, and is light in weight. For this reason it is being increasingly used for constructing many articles of modern furniture. See p. 15.

MODERN FURNITURE

At the present time each piece of modern furniture tends to become smaller in size than its predecessor, owing to the popularity of flats which are to a large extent taking the place of houses, while the rooms in both flats and modern houses are very much

smaller and lower-ceilinged than they were in the past. Also modern housewives do not wish to be burdened with large stocks of possessions—either household goods or personal things—therefore the necessity for having large cupboards and roomy furniture for storing purposes does not now exist. The average housewife has a reasonable supply for her immediate needs, which she replenishes when the occasion demands. Modern furniture is made from lighter-coloured woods such as oak, elm, beech, etc., in place of the dark, heavy-coloured



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PARKER-KNOLL CHAIR

The removal of the cushions shows the spiral wire construction.

ebony, mahogany, etc., which were so popular in the past. Another characteristic of modern furniture is its dual nature—the result of lack of space in modern rooms, and also for economic reasons, which require one room to do duty for two purposes. Thus beds are made to look like divans or chesterfields—dressing-tables and washstands to look like bureaux and cabinets—floor pouffes hold knitting and needlework, and so on. Finally, modern furniture is characterized by simplicity of design and form. Ornamentation has been abolished, and the beauty of a piece of furniture rests on its simplicity, the choice of beautiful woods, and perfection of craftsmanship.

Furniture	Apparatus required	Daily Cleaning and Polishing
A. Cane	<i>For daily and weekly cleaning and polishing</i> Two clean soft dusters, or soft dusting brush <i>For spring or periodic cleaning and polishing</i> Two clean soft dusters, or soft dusting brush Bowl of tepid salt water Bowl of cold salt water Flannelette cloth Linen cloth	Dust or brush thoroughly
B. Fumed Oak	As for polished wood	As for polished wood
C. Leather	<i>For daily and weekly cleaning and polishing</i> Two clean soft dusters <i>For spring or periodic cleaning and polishing</i> Two clean soft dusters, or Electric vacuum cleaner Warm soapy water, or Vinegar and oil Flannelette cloth Linen cloth	Dust thoroughly to remove surface dust, paying particular attention to folds around buttons

FURNITURE

Weekly Cleaning and Polishing	Spring or Periodic Cleaning and Polishing	Notes
As for daily cleaning and polishing	(i) Dust or brush thoroughly. (ii) Wash with tepid salt water, using a flannelette cloth. Allow one tablespoonful of salt to one quart of water (iii) Rinse with cold salt water, using the same proportions of salt to water (iv) Dry with a soft linen cloth (v) Finish drying in the open air if possible, or by an open window NOTE. If very dirty, tepid soapy water may be used for washing, but should be avoided unless absolutely necessary as it softens the cane and helps to discolour it	Salt helps to stiffen, bleach, and remove stains from cane <i>To tighten limp cane chairs</i> (i) Dust thoroughly (ii) Dab the cane with boiling soda water. Allow 1 oz. soda to 1 qt. of water. Use a net or flannelette cloth (iii) Dry with a linen cloth, and finish drying in the open air (iv) Do not allow the strong soda water solution to touch the framework of the chair or the polished surface will be damaged (v) Always hold a cloth under the cane to prevent sagging, and to encourage shrinkage NOTE. If possible do this work out of doors
Polish with linseed oil and vinegar (two parts oil to one part vinegar)	As for polished wood	
As for daily cleaning and polishing	(i) Remove surface dust by using dusters, or an electric vacuum cleaner (ii) If very slightly soiled, wipe the surface with a cloth wrung out of warm soapy water (iii) If dirty, rub with a mixture of oil and vinegar, allowing two parts of oil to one part of vinegar (iv) If very dirty wash with warm soapy water. Use a flannelette or net cloth (v) Rinse thoroughly and dry (vi) Polish, using a little good furniture polish or cream or a white shoe cream	Furniture polish or cream supplies the leather with wax and oil, which keeps the material supple and prevents cracking

Furniture	Apparatus required	Daily Cleaning and Polishing
D. <i>Leather Cloths</i>	As for leather	As for leather
E. <i>Polished Wood</i>	<i>For daily cleaning and polishing</i> Two clean soft dusters, or dusting brush <i>For weekly cleaning and polishing</i> Two clean soft dusters, or dusting brush Bowl of warm vinegar and water Flannelette, or chamois leather Linen cloth Suitable furniture polish Rag Two dusters <i>For spring or periodic cleaning</i> See previous notes on care and cleaning of polished wood	(i) Dust thoroughly to remove surface dust. For very carved surfaces use a small dusting brush (ii) Whilst dusting rub the surface thoroughly to brighten it
F. <i>Upholstered Furniture</i>	<i>For daily and weekly cleaning and polishing</i> Two clean soft dusters, or soft dusting brush <i>For spring or periodic cleaning and polishing</i> Upholstery brush, or Cane beater, or Vacuum cleaner Bowl of warm soapy water Ammonia Vinegar Salt Flannelette cloth, or linen cloth Linen cloth for drying	(i) Brush gently to remove surface dust (ii) If very light-coloured or of very delicate material, it should be dusted with a clean soft duster

FURNITURE (cont.)

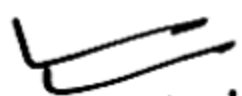
Weekly Cleaning and Polishing	Spring or Periodic Cleaning and Polishing	Notes
As for leather	As for leather	When washing, avoid making the surface too wet
(i) Dust or brush thoroughly to remove surface dust (ii) If sticky wash with vinegar and warm water, used in equal quantities. Use a flannelette cloth or a chamois-leather (iii) Dry with a clean, linen cloth (iv) Polish with a suitable furniture polish, applied with a rag, and rubbed in thoroughly (v) Finish polishing with two clean soft dusters NOTE. Discretion must be used as to the application of polish. It is unwise to use it too often	See the cleaning and care of polished wood, page 16	<i>Removal of stains</i> <i>Hot-plate marks</i> Rub with one of the following: (i) Linseed oil (ii) Spirits of camphor (iii) Dark furniture polish <i>Marks made by scent or perfume</i> (i) Wipe up immediately (ii) Rub with paraffin and leave for twenty-four hours (iii) Polish with furniture polish <i>Scratches</i> (i) Paint over the scratch with iodine, or Rub with a mixture of equal parts of camphorated oil and turpentine (ii) Leave for 24 hours (iii) Polish with furniture polish
As for daily cleaning and polishing	(i) Remove the surface dust by (a) Brushing thoroughly, or (b) Beating thoroughly (This should be done outside), or (c) Using a vacuum cleaner (ii) Wash the surface with warm soapy water, with the addition of ammonia, allowing one teaspoonful of ammonia to one quart of water. Use a soft clean cloth and work over a small portion of the surface at a time. If there is any blue in the colour of the pattern omit the ammonia (iii) Rinse with clean warm water (iv) Give a final rinsing with cold water, vinegar, and salt. Use enough vinegar to colour the water, and one tablespoonful of salt to one quart of water	The special cleaning should be done in the open air if possible, failing which the chair should be placed on a dust sheet or several sheets of newspaper and cleaned in the room

Furniture	Apparatus required	Daily Cleaning and Polishing
F. Upholstered Furniture (cont.)		
G. Wicker (i) Brown	<i>For daily and weekly cleaning and polishing</i> As for cane <i>For spring or periodic cleaning and polishing</i> Two clean soft dusters, or soft dusting brush Bowl of warm soapy water Flannelette or net cloth Soft nail cloth Clean dry linen cloth Liquid furniture polish Rag Two dusters	As for cane
(ii) White	<i>For daily and weekly cleaning and polishing</i> As for cane <i>For spring or periodic cleaning and polishing</i> Two clean soft dusters, or soft dusting brush Bowl of warm, salted water Bowl of cold water Flannelette or net cloth White furniture polish Rag Two clean soft dusters	As for cane

FURNITURE (cont.)

Weekly Cleaning and Polishing	Spring or Periodic Cleaning and Polishing	Notes
	(v) Dry with a soft cloth (vi) Finish drying in the open air, by a wide-open window, or near a fire <i>Alternative methods of cleaning</i> 1. <i>Warm bran.</i> Rub the surface with bran previously warmed in a hot oven. Leave for about an hour and then brush thoroughly 2. <i>Bread crumbs mixed to a paste with</i> (a) Petrol, or (b) Methylated spirit rubbed over the surface. Leave for an hour and then brush off	
As for cane	(i) Remove all cushions (ii) Dust or brush thoroughly to remove surface dust (iii) Wash with warm soapy water, using a flannelette or net cloth. If very dirty a soft nail brush can be used (iv) Rinse thoroughly and dry (v) Finish drying in the open air if possible (vi) Polish with a liquid furniture polish	(a) If soapy water tends to remove the brown stain, use paraffin for washing the wicker (b) Avoid the use of furniture cream as it is difficult to remove from crevices. (c) Avoid making the wicker too wet, as this tends to make it creak and crack (d) Never dry wicker in front of a fire, as it will cause the wicker to creak
As for daily cleaning and polishing	(i) Remove all cushions (ii) Dust or brush thoroughly to remove surface dust (iii) Wash with warm salted water, using a flannelette or net cloth. If very dirty a soft nail brush can be used. Allow one tablespoonful of salt to one quart of water (iv) Rinse thoroughly with cold water (v) Dry with a soft cloth (vi) Finish drying in the open air if possible (vii) Polish with white furniture polish	

CHOICE, CLEANING, AND CARE OF FURNITURE • NOTES



CHAPTER VII

CHOICE, CLEANING, AND CARE OF CLEANING EQUIPMENT

BROOMS AND BRUSHES

The Brooms and Brushes used in Household Cleaning include

- (a) Long-handled, soft-haired sweeping broom.
- (b) Long-handled, stiff carpet broom.
- (c) Long-handled, soft-haired wall broom.
- (d) Long-handled, soft-haired cornice broom.
- (e) Long-handled, stiff yard broom.
- (f) Short-handled, soft-haired sweeping brush, sometimes known as a dustpan brush.
- (g) Ledge brush, similar to a dustpan brush, but smaller in size, and used for dusting ledges. Sometimes known as a dusting brush.
- (h) Short-handled, stiff carpet brush.
- (i) Upholstery or mattress brush.
- (j) Scrubbing brush.
- (k) Saucepan brush.
- (l) Sink brush.
- (m) Lavatory brush.
- (n) Shoe brushes (sometimes bought in sets of three).
- (o) Silver cleaning or plate brushes.
- (p) Brass cleaning brush.
- (q) Flue brush.
- (r) Black-leading brushes (bought in sets of three).
- (s) Sweep's brush.
- (t) Hearth brush.

NOTE. The difficulty of storing long-handled wall and cornice brooms can be overcome by the use of the modern models which have extending handles.

It is not always possible, or necessary, for a housewife to have the full list of brushes. One brush may be used for two purposes, e.g. the head of a clean, long-handled, soft-haired broom may be covered with a clean duster and used as a wall broom; or a clean, short-handled, stiff brush could be used as an upholstery or mattress brush. Some brushes may be omitted if funds or lack of storage space prevent their being bought, i.e. for the round black-leading brush a pad of newspaper may be substituted. Some brushes may

not be required; if there are no open fires in the house a hearth brush will be unnecessary.

Choice of Brooms and Brushes

1. Buy good quality brushes. It is false economy to buy cheap ones.
2. The hair or bristles must be closely set.



PHOTOGRAPHED BY COURTESY OF JOHN LEWIS AND COMPANY LIMITED

HOUSEHOLD CLEANING UTENSILS

A. Galvanized iron pail; B. Enamel housemaid's bucket; C. Galvanized iron bath; D. Long-handled stiff carpet broom; E. Carpet sweeper; F. Long-handled soft carpet broom; G. Polishing mop; H. Rubber kneeling mat; I. Stiff carpet brush; K. Sweeping brush; L. Enamel dustpan; M. Enamel housemaid's box; N. Floor-dusting mop; P. Wall broom.

3. Good hair is soft and pliable, not spikey.
4. Good bristles are hard and pliable.
5. The broom-head should be well covered with tufts.
6. All wooden parts should be smooth and curved at the edges to minimize the risk of damage to furniture when in use.

Household Brooms and Brushes are made of Various Substances

- (a) *Horsehair*. This is expensive, and is used for making good quality sweeping brooms and short-handled dustpan brushes. It comes from many parts of the world, but as a rule the best qualities are exported from South America, which produces the stiffest and finest horsehair in the world. Horsehair from China is very soft.
- (b) *Fibre*, for the making of carpet brooms. The fibre is a coarse dried grass grown largely in America. If a brush is examined the grass with the dried seed-pods still adhering can easily be seen.
- (c) *Bass*, or *Piassava*, for the making of yard brooms. It is obtained from the inner bark of the linden, lime, or bass tree, and first began to be used in the middle of the nineteenth century. It was the first real fibre to be used for brush making in England.
- (d) *Bassine* comes from both India and Africa and is a fibre with characteristics similar to bass—and it is often used as a substitute for bass. It can be used for such brushes as need not be quite as stiff as those made with ordinary bass.
- (e) *Bristle*, the stiff hair of swine. Its forked tips, resiliency, and minutely ridged surface have made it a basic material in brush manufacture for many years. It is produced and prepared chiefly in China, the Soviet Union, Japan, Poland, India, Germany, and France.
- (f) *Nylon*. This remarkable new material is built up from the by-products obtained from coal. It is a thermoplastic material and can be melted and forced through nozzles to form threads.

As the threads come from the nozzles they are stretched to several times their original lengths. They are then very strong and resilient, and are extensively used in the manufacture of brushes. Nylon 'bristles' never absorb odours, and dry in a very short time.

- (g) *Substitutes* for all these substances are now obtainable and are used in the manufacture of cheaper specimens of brushes.

The head and handle of household brushes may be of

- (i) Wood, finished in various ways:
 - (a) Left plain, e.g. saucepan brushes.
 - (b) Painted and varnished, e.g. sweeping brushes.
 - (c) Painted with enamel or synthetic enamels.
 - (d) Sprayed with or dipped into cellulose.

- (ii) Metal.
- (iii) Plastics—such as pyroxylin or bakelite.
- (iv) Rubber.

The corners of a brush which may be used near painted or polished woodwork should always be protected with strips of velvet, felting, or rubber. This protects the woodwork if the brush should come accidentally into contact with it.

The cost of all brushes varies greatly with the type of head, and the material used for making the back and handle. Very cheap brushes are not a good form of economy, as the bristles very soon begin to break and to fall out.

Making of Brushes

The tufts forming the brush-head are secured into the wood, either:

- (a) By means of glueing (this is the usual method); or
- (b) By doubling the tufts in half, and passing the loop through small holes, made in a piece of thin wood shaped according to the brush-head. The loops are then secured by means of brass or copper wire, and over all is then glued another piece of wood known as the 'stock,' which gives additional protection, as well as shape, to the brush-head.

Twisted-in-wire brushes, such as bottle brushes and some toilet brushes such as nail brushes have been on the market for many years. The chief characteristic of bottle brushes is their flexibility.

Cleaning of Household Brooms and Brushes

Brushes made from Hair or a Mixture of Hair and Bristle

- (i) Remove any loose fluff on to a piece of newspaper, roll up the newspaper tightly and burn.
- (ii) Clean the wooden head and handle according to the way in which the wood is finished.
- (iii) Prepare a large tub or galvanized-iron bath of warm soapy water.
- (iv) Beat the brush-head up and down on the surface of the water until the hair is perfectly clean.

NOTE. This work should be done out of doors if possible, where splash marks are unimportant. A sufficient depth of soapy water must be prepared to enable the whole of the hair to be washed, without the brush touching the bottom of the tub or bath.

- (v) Use a net cloth to clean in between the tufts.

- (vi) Rinse in clean warm water.
- (vii) Rinse in clean cold water, to counteract the softening action of the hot water.
- (viii) Shake well, and dry the tufts gently with a net cloth. This helps to hasten the drying.
- (ix) Dry in the open air, with the bristles downwards, to allow the water to drain out and so prevent the wooden head from becoming water-sodden. This can be accomplished by hanging the brush-head downwards from a clothes line. In a flat the brushes may be hung from an airer—or placed across the back of two chairs with the head near an open window.

Brushes made from Fibre

- (i) Remove any loose fluff on to a piece of newspaper, roll up tightly and burn the paper.
- (ii) Prepare a large tub or galvanized-iron bath of tepid salt water. Allow two tablespoonfuls of salt to each bucketful of water.
- (iii) Wash the fibre brush in the tepid water.
- (iv) Rinse in cold salted water, allowing the same proportions of salt.
- (v) Dry in the same way as for hair brooms.

NOTE. Avoid the use of soap unless the brooms and brushes are exceptionally dirty. Soap tends to soften the fibre.

Brushes made from Bass or Bassine

Wash, rinse, and dry as for hair brushes, but ammonia or washing soda may be added to the washing water if the brushes are greasy.

Special Cleaning of Certain Household Brushes

A. Scrubbing Brushes

- (i) After use, rinse very thoroughly in hot water to remove all the dirty soapy water.
- (ii) Dry by standing on end, preferably by an open window or in the open air. If this is not possible, then stand the brush on the bristles. In this way the water runs out of the brush and the wooden head does not get sodden.

B. Saucepan and Sink Brushes

- (i) Always rinse very thoroughly after use.
- (ii) If greasy, rinse in hot soda water.
- (iii) Hang to dry.

C. Black-leading Brushes

- (i) Place the brushes in a pailful of hot soapy, soda water; leave for half an hour, stirring occasionally, and changing the water if necessary.
- (ii) Rinse thoroughly.
- (iii) Scrub the wooden parts of the brushes.
- (iv) Wash the bristles in hot soapy water.
- (v) Rinse thoroughly in clean hot water.
- (vi) Rinse finally in clean cold water.
- (vii) Dry in the open air.

D. Silver-cleaning Brushes

- (i) Steep in cold water for about half an hour to loosen the plate polish.
- (ii) Wash, rinse, and dry as for hair brooms.

E. Latory Brushes

- (i) Wash as for ordinary bass brushes, but add disinfectant to the washing and rinsing waters.
- (ii) Always hang in the open air to dry.

Care of Household Brooms and Brushes

- (i) Use for the correct purpose.
- (ii) Use the cleanest brush for the cleanest work.
- (iii) Keep special brushes for kitchen and for outdoor work.
- (iv) Stand the brush on the floor correctly to avoid flattening the bristles.
- (v) When not in use hang up in a cupboard, or in a broom-rack.
- (vi) After use remove all pieces of fluff, cotton, etc., and put away the brooms and brushes in a condition suitable for use next day.

CARPET SWEEPERS

This type of cleaner is sometimes known as a box sweeper. It is used only for the removal of surface dust from carpets and rugs. It consists of a polished wooden box, supported on four wheels. On the under-surface there are two dustpans, between which there is a revolving brush. The whole is moved by means of a long polished wooden handle.

The box is provided with a furniture guard consisting of thick, strong cotton braid with rubber corner cushions, which thus effectively protects any furniture with which the sweeper may accidentally come in contact. The wheels are rubber tyred. The sweeper is pushed backwards and forwards over the carpet, and

the action of the revolving brush is to throw the surface dust into one of the two dustpans, which can be opened by means of a lever, and the dust emptied out and burnt. The brush is held in place by a spring or steel end-band, which enables it to be easily removed for cleaning purposes.

Choice of a Carpet Sweeper

- (i) The sweeper should be of medium size and medium weight. A very small or very light one is ineffective and a very heavy one is tiring to use.
- (ii) The bristles of the brush should be good, plentiful, and of medium length.
- (iii) There should be a good furniture guard.
- (iv) The wheels should be rubber tyred.

Cleaning a Carpet Sweeper

(a) *Daily*

Empty the dustpans, and remove all fluff and pieces of cotton, etc., from the brush. Wrap the dust in newspaper and burn.

(b) *Occasional*

- (i) Remove the dust and fluff as for daily cleaning.
- (ii) Unscrew the handle, remove the furniture guard, and take out the revolving brush.
- (iii) Wash the brush, using the same method as for a hair broom or brush.
- (iv) Dust and wipe the inside of the box and the dustpans with a net cloth wrung out of hot soapy water. Do not make the surface too wet.
- (v) Dust, wash, and polish the polished wooden box and handle.
- (vi) Clean the rubber with paraffin.
- (vii) Brush the braid with an upholstery or clothes brush.
- (viii) When the brush is dry, replace it, and screw in the handle.
- (ix) If necessary oil the wheels, and the pivots and bearings on which the brush revolves.

The housewife must use her judgment as to the frequency with which this occasional cleaning is done. It depends entirely on the amount of work that is expected of the sweeper.

MOPS

A. Floor Dusting Mops

These are inexpensive, and are used for the removal of surface dust from polished wood or linoleum floors, also for the removal

of dust from skirting-boards. The dust is collected in the mop-head and got rid of by dispersal, i.e. by shaking the mop-head out of a window.

Cleaning

(a) Daily

Shake thoroughly to remove the dust.

(b) Occasional

- (i) Shake thoroughly as in daily cleaning.
- (ii) Wash in hot soapy water.
- (iii) Rinse thoroughly in clean hot water.
- (iv) Squeeze as dry as possible.
- (v) Shake in the open air to open the mop-head and finish drying in the open air.

B. Floor-washing Mops

These are used for washing large smooth floor surfaces, such as tiles or marble, and also for mopping up water which has been spilt. They are inexpensive and similar to the dusting mops, being made from twisted yarn, soft string, or narrow strips of flannel material. For washing floors they should be used with a special pail, which is fitted with a strainer in which the mop can be squeezed to remove excess soapy water.

NOTE. The floor must be well swept before being washed.

Cleaning

- (i) After use, rinse thoroughly in clean hot water.
- (ii) Occasionally the plain wooden handle may require scrubbing.
- (iii) Shake the mop-head to open it, and to allow it to dry.
- (iv) Store, standing head uppermost, if possible.

A sponge-mop with a self-squeezing device is now obtainable and saves time and labour in floor washing. It is most suitable for smooth floors.

C. Floor-polishing Mops

There are many varieties on the market, but they all belong to one of two types:

- (a) *Cotton-headed mops impregnated with oil.* In some cases the mop-head is allowed to soak in oil and when thoroughly impregnated it is used for floor-polishing. In other cases the head consists of lengths of soft cotton yarn sewn into a band of cotton material, which in turn is fixed round a perforated metal plate on to which oil can be poured, to

trickle through the holes and so saturate the mop-head. Both these types can be bought in different sizes and qualities, and all are attached to long wooden handles.

- (b) *Weighted polishing mops*. These vary in size, weight, and quality. The weighted head has a flat surface, which can be covered with a duster or cloth, so providing a surface for rubbing in a wax polish, which is generally spread by hand. A quicker way of spreading polish is to use a liquid polish in a sprinkler-topped tin, and sprinkle sparsely over the floor surface. Some mops are provided with a special wool-surfaced pad which can be slipped over the mop-head and used to give a final polish. Others have easily-worked clips which enable a folded duster to be clipped into position, and as easily and quickly removed, or turned to enable a clean surface to be used for polishing.

Cleaning

(a) *Daily*

No daily cleaning.

(b) *Occasional*

1. *Cotton-headed Mops*

- (i) Remove all bits of fluff, etc.
- (ii) Soak, wash, and rinse in turpentine.
- (iii) Squeeze as dry as is possible.
- (iv) Re-impregnate with oil.

2. *Weighted Polishing Mops*

As these are used with a duster over the mop-head, no special cleaning is required.

D. Washing-up Mops

These are very inexpensive and are of great service when washing-up as they allow the use of very hot water, which gives a good finish to china, etc.; they also enable the housewife to do the work without immersing her hands. They consist of a soft white cotton-yarn head, fixed to a short plain wooden handle.

Cleaning

Rinse well, after use, in clean hot water. Squeeze dry, shake in the open air, and place upright in a jam-jar to dry.

E. Furniture-dusting Mop

This is a special type of dusting mop, used for special pieces of furniture, such as banishers, radiators, legs of tables and chairs, etc. The mop consists of a U-shaped cotton-covered head, attached to

a short polished wooden handle. The length of the arms of the U varies, as does the distance between the arms, according to the kind of dusting for which the mop is to be used. It is extremely useful, as it enables awkwardly-shaped surfaces to be dusted quickly and thoroughly.

Cleaning

(a) Daily

Shake thoroughly to remove all loose dust.

(b) Occasional

- (i) Shake, as in daily cleaning.
- (ii) Wash in warm soapy water.
- (iii) Rinse thoroughly in clean hot water.
- (iv) Squeeze dry.
- (v) Shake thoroughly and finish drying in the open air.

ELECTRIC VACUUM CLEANERS

A very large number of electric cleaners are now on the market, varying considerably in capacity, size, weight, initial cost, and running costs. Where electricity is available they form one of the housewife's most valuable and important pieces of cleaning apparatus. When used for the cleaning of carpets and floors, etc., the work is done with very great thoroughness, in a very short space of time, and with the expenditure of the minimum amount of effort on the part of the housewife.

Choice of Electric Cleaners

- (a) Buy machines for which spare parts can be easily and cheaply obtained.
- (b) Buy a machine which carries a guarantee.
- (c) Buy from a reputable firm.
- (d) Give due consideration to the possibilities of purchase on the instalment plan.

Types of Electric Cleaners

Electric vacuum cleaners are of two types:

The OUTSIDE BAG type, also known as the broom-handle type, such as the Hoover, the Whirlwind, the Magnet, etc.

The ENCLOSED BAG type, such as the Electrolux, the Vactric, the Daisy, etc.

The underlying principles governing the construction and use of these electric cleaners are practically identical, varying only slightly with the different machines. A detailed knowledge of one or two specimens of each type should enable a housewife to make good use of whatever model she may encounter.

Outside Bag Vacuum Cleaners: The Hoover

The Hoover may be taken as a typical example. The Hoover cleans by beating, shaking, brushing, and suction—the whole action being somewhat complicated. The machine is made in three sizes:

- (a) The Hoover Junior model.
- (b) The Hoover Standard model.
- (c) The Hoover Heavy Duty model.

There is also a smaller machine, the Hoover Dustette model.

Additional Parts

Dusting tools can be bought separately for (a), (b), and (c).

Cost

The machine may be bought outright, or hire-purchase terms can be arranged to suit the purchaser.

Construction of the Hoover Standard Model

A. The **body** is made of metal and chromium. There is a rubber buffer or furniture-guard round the body of the machine.

B. The **handle** is made of metal, with a rubber hand-grip. It can be used in three positions:

- (i) Upright, for storage.
- (ii) Normal, for sweeping. This angle varies according to the height of the worker.
- (iii) Very low, to allow of the machine being pushed under furniture, beds, etc.

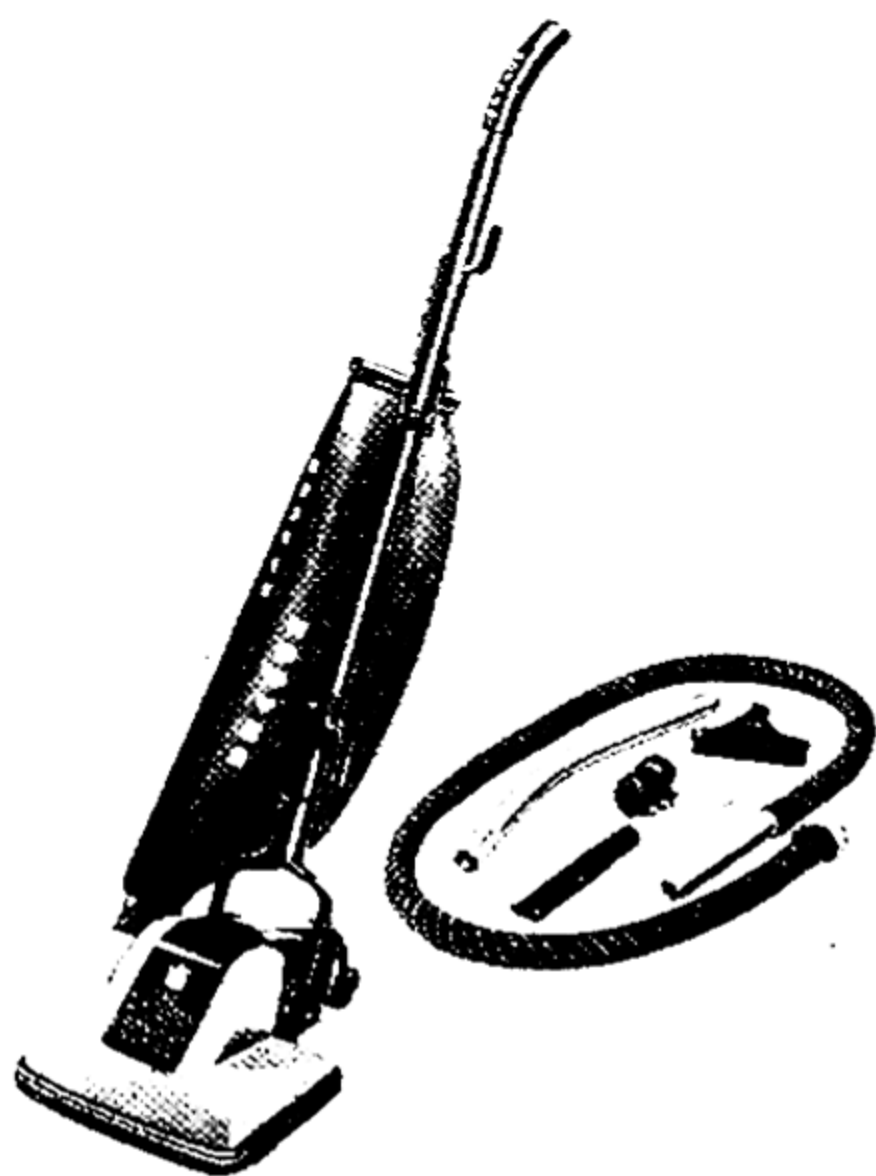
C. The **switch**. This is foot controlled.

D. The **motor**. The motor need never be exposed and should never be tampered with either by the housewife or an enthusiastic amateur. It should be repaired only by the firm's qualified engineers.

E. The flex. This is specially made for this purpose and consists of three wires, each covered first with cotton, and then with rubber. The three wires are then bound together with thin string, with a final outer covering of rubber. When not in use, the flex should be loosely wound round the hooks on the handle.

F. The plug. This is a two-pin rubber plug and enables the machine to be plugged into an electric bulb-holder.

G. The light. Useful when working in dark corners of a room, or under large pieces of furniture. It is very well shielded and protected, and the bulb can be removed if necessary. Is not included in the Junior model.



HOOVER LTD

HOOVER VACUUM CLEANER

H. The bag. This is made of a special three-ply cotton fabric which has been chemically treated to allow the air to escape as fast as the fan drives it in, but at the same time prevents the dust from escaping. After a great number of years the pores of the bag become clogged with dust, which prevents the air from escaping, with the result that back-pressure is caused which is very bad for the motor, and overheats it. To remedy this the bag should be renewed.

To prolong the life of the bag use one of the dusting tools and, with the motor working, brush the outside of the bag.

The ends of the bag are fitted with:

- (a) A metal slip-ring which fits round special sockets and so holds the bag firmly into place.
- (b) A metal clip which holds the folded end firmly. The clip can be attached to the handle by means of a spring and lock.

To empty the Bag:

- (i) Place the machine on a piece of newspaper.
- (ii) Remove the bag, folding the ring end over to enclose the dirt; slide off the top closure clip.
- (iii) Invert the opened end on the newspaper, holding it down firmly with both feet, then shake the bag vigorously until clean.

I. The **agitator**. This is the actual cleaner, and consists of a roller with two beating bars and one brush on each half of the roller. It is mounted on dust-proof roller bearings, and need never be taken out or tampered with by the housewife. The agitator is fixed to the fan pulley by means of a thick rubber belt. This must be put on very carefully, following the stamped typed instructions printed on the machine.

J. The **pulley cover**, in the Junior model only. This has only to be removed to allow the dusting tools to be used.

K. There is automatic adjustment of the cleaner to varying thicknesses of carpet.

L. The **dusting tools**. These consist of:

- (a) A flexible tube eight feet long. Either end can be fitted into the pulley cover.
- (b) Extension tubes.
- (c) Nozzles of varying sizes and shapes.
- (d) Converter.

NOTE. The number of extension tubes and nozzles varies according to the model.

For blowing. Leave off the cover plate and disconnect the belt. Detach the bag and instead fit the swivel end of the hose to the cleaner outlet. Use the crevice nozzle to blow dust from behind radiators, etc.

To use the Hoover

- (i) Fit up the machine according to the cleaning to be done.

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- (ii) Connect the flex with the wall plug, and switch on the current.
- (iii) Control the movement by the handle switch.
- (iv) Move the machine or the nozzle slowly, evenly, and regularly over the whole surface to be cleaned.
- (v) Empty the bag and burn the dust.
- (vi) Replace bag and wind flex round the handle; stand the machine with the handle upright.

Outside Bag Vacuum Cleaner: The Dustette

This is also made by the Hoover firm. It is very small and light, weighing when fully assembled 5 lb. It is especially useful for cleaning clothes, curtains, hangings, risers of stair carpets, upholstery of cars, etc. It is very valuable in small flats where storage space is limited.

Construction of the Dustette

A. The **motor**. This is very carefully balanced to make it easy to hold and to use. The motor is entirely enclosed, and there are rubber studs between the motor cover and the outside.

B. The **handle**. This is made of bakelite and is very carefully insulated. The switch is easily reached, and the positions 'on' and 'off' are clearly marked.

C. The **plug**. It is made to fit into an electric-light holder only.

D. The **cleaning action**. This consists of brushing and suction only. The nozzle should be drawn towards the worker; thus the brush disturbs the dust and the suction picks it up.

E. The **wall fixture**. A rubber-covered wire bracket which can be screwed on to a wall or cupboard, and which holds the Dustette when it is not in use. When storing the machine, wind the flex round the bag and nozzle in a figure-of-eight manner.

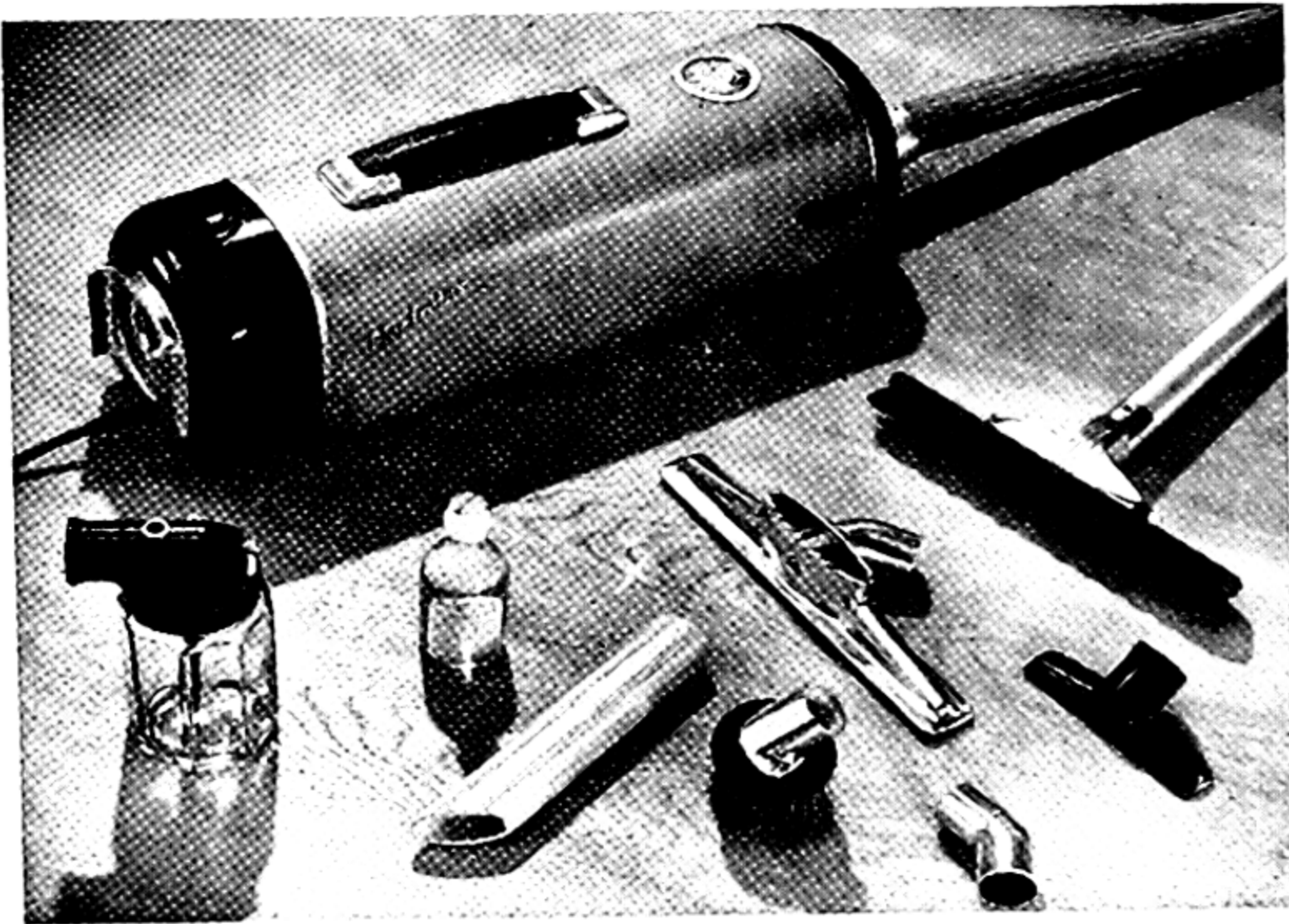
Enclosed Bag Vacuum Cleaner: The Electrolux

The Electrolux cleans by means of suction only. It is made in two sizes:

- (a) Standard model.
- (b) Electrolux Minor model.

Additional Parts

All the dusting tools and the wooden case are included in the price.



ELECTROLUX LTD

ELECTROLUX VACUUM CLEANER*Cost*

The machine may be bought outright, or hire-purchase terms may be arranged.

Cost of Running

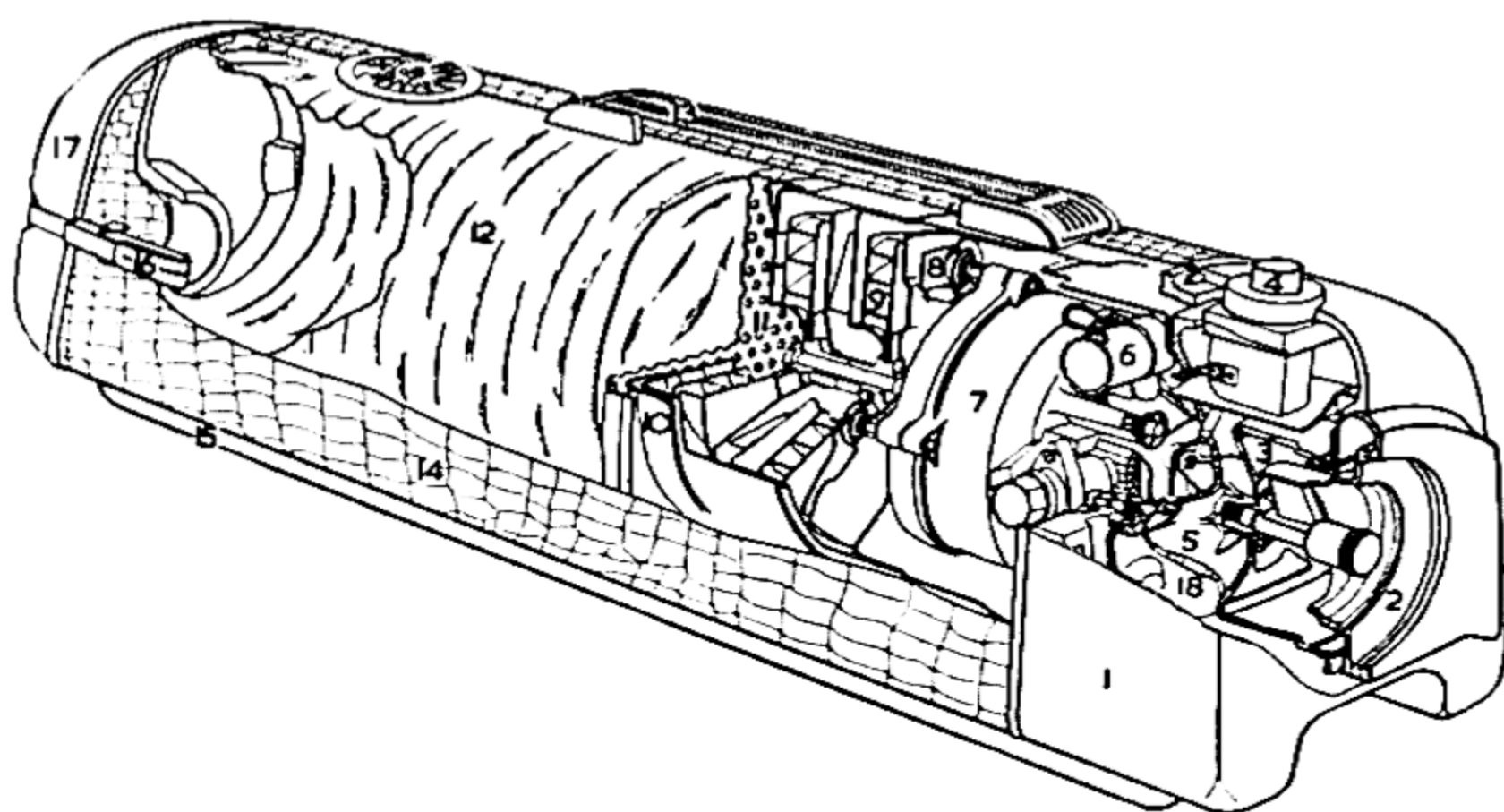
The Electrolux Model 55 will work for $2\frac{1}{2}$ hours on one unit of electricity. The cost per unit varies in different parts of the country.

Construction of the Electrolux Machine

A. The metal **body or container**. This is mounted on polished metal runners, and is easily moved over any floor surface. On the top is fitted the foot-switch which controls the motor, and a leather-strap handle to enable the machine to be easily moved. The body contains:

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- (a) The *dust bag*. This is made of specially woven cotton material, and is capable of holding 14 lb. of dirt.
- (b) The *motor*, which is well insulated, and should not be tampered with by the housewife.
- (c) The *purification pad*. This is impregnated with strong disinfectant, which imparts a refreshing smell to the room. The air which is sucked into the dust bag deposits its burden of



DETAIL OF ELECTROLUX COMPONENTS

1. *Filter housing*; 2. *Exhaust socket*; 3. *Air purifying pad*; 4. *Foot switch*; 5. *Suspension bracket*; 6. *Radio interference suppressor*; 7. *Motor housing*; 8. *Motor*; 9. *Two-stage fan system*; 10. *Rubber insulation between motor and casing*; 11. *Body partition*; 12. *Dust bag*; 13. *Rubber handle*; 14. *Pegamoid covering*; 15. *Runners*; 16. *Front cover clips*; 17. *Front cover*; 18. *Television suppressors*.

dust inside the bag and passes out to the exhaust end, but before being finally ejected it has to pass through the pad, which thus prevents any germ-laden air passing out into the room.

B. The **suction end** of the metal container has a movable metal cover which is held in place by two metal spring clips. In the centre of the cover is a hole into which can be screwed the flexible tube.

C. The **exhaust end** is fitted with a similar metal cover, held in place by means of a special centre screw. There is also a louvre ventilator in the centre of this cover which causes the outcoming air to be

deflected upwards, and so prevents the dust on the ground from being disturbed.

D. The **extension tubes**. Two straight tubes which can be used singly or together. One end of each tube is enlarged to take the end either of a nozzle or of the other tube.

E. The **flexible tube**. This has a special screw collar to enable it to be screwed into the end of the metal body.

F. The **large flat nozzle**, used for carpets and large rugs. It has a movable joint to enable it to get under and round furniture, and one end is weighted to enable it to swing over. The other side is roughened, and this enables the machine to pick up threads, bits of fluff, etc.

G. The **long brush**. Used for smooth surfaces: linoleum, polished wood floors, walls, ceilings, etc.

H. The **small round brush**. Used for dusting ornaments, pictures, rails, tops of doors, ledges, curtain-rods, etc.

I. The **small smooth nozzle**. Used for cleaning upholstered furniture, stair-carpets, clothes, mattresses, etc.

J. The **flattened tube or crevice nozzle**. This is used for such parts as between the back and seat, or the arms and the seat of upholstered furniture, or for radiators, book-shelves, etc.

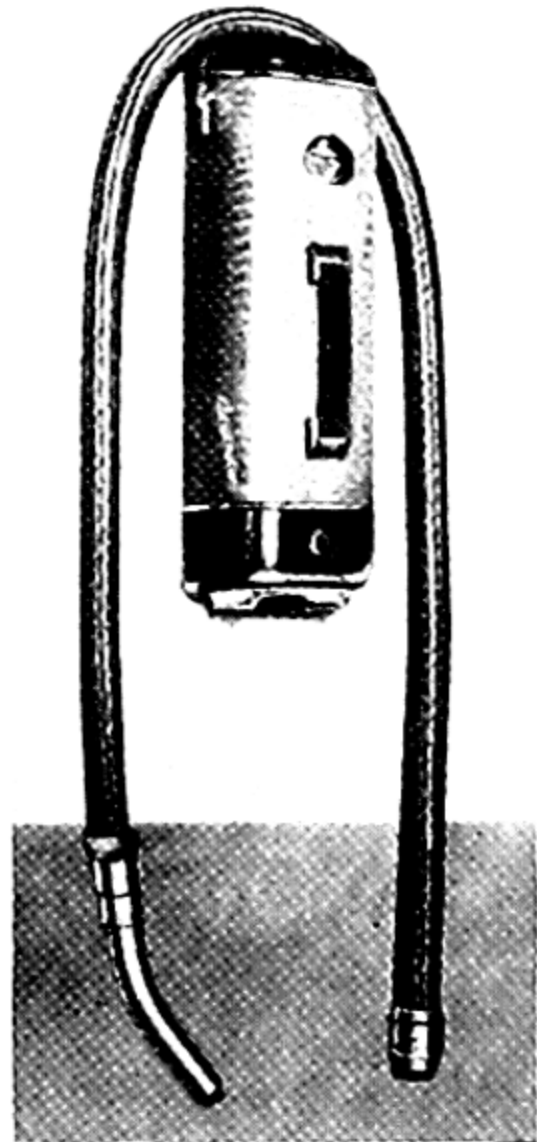
K. A **sprayer** for spraying insecticides inside cupboards or luggage, or for the washing of carpets. The hose is screwed on the exhaust end and the sprayer fixed to the end of the hose.

L. The **elbow or angle piece**. When fixed, this attachment gives a more useful angle to the various dusting tools, and enables them to be used more successfully on high or very low surfaces, such as the tops of pictures or under mattresses.

M. The **flex**. This is covered with very tough rubber.

The **exhaust end** can be used for various purposes:

- (a) As an insecticide sprayer.
- (b) For drying hair.



CLEANER HUNG
ON WALL
BRACKET

- (c) Blowing out dust from behind radiators, from the inside of pianos, etc.
- (d) For dusting large plants, such as palms.
- (e) For washing and drying carpets.

To use the Electrolux

- (i) Fit up the machine correctly.
- (ii) Use the correct nozzle according to the cleaning to be done.
- (iii) Connect the flex with the wall plug and switch on the current.
- (iv) Control the current by using the foot-switch on the machine.
- (v) Move the nozzle slowly, evenly, and regularly over the whole surface to be cleaned.
- (vi) Switch off the current first at the body switch, and then at the wall switch.
- (vii) Disconnect the parts.
- (viii) Empty the dust bag, inverting it on a sheet of newspaper. Stand on either side of the metal rim and, using the tape-loop, shake the bag to loosen the dust, which then falls on to the newspaper. Roll up the newspaper and burn.
- (ix) Replace the dust bag.
- (x) Hang the cleaner by its wire loop on a hook in a cleaning cupboard.

Note. Never attempt to wash the dust bag of a vacuum cleaner, as this is likely to open up the weave and make it more porous, with the result that a certain amount of dust will pass through.

ELECTRIC FLOOR POLISHERS

Polishing wooden floors by hand is a very heavy and laborious piece of practical work, which can be greatly simplified by the use of an electric polisher. There are very many different types now obtainable, but all are based mainly upon the same principle: that of electrically revolved brushes, which rub into the wood polish which has previously been spread either by hand or by means of a sprinkler tin.

Some manufacturers suggest that the revolving brushes should be used to spread the polish, but experience shows that the polish clogs up the bristles of the brushes, and it is therefore more economical to spread the polish by hand, or to sprinkle it.

Construction of Electric Polishers

A. The head of the polisher. This is made from some white staybrite metal, and is weighted to give a better result. The head

is usually fitted with a rubber furniture guard. The under-surface consists of two or three circular brushes, which are easily detachable. Two sets of brushes are usually sold with each polisher. In some cases a set of felt polishing-pads is added and used to give a final finish to the floor.

B. The handle. This is adjustable to practically any angle, but can also be clipped securely into the upright position for ease in carrying the machine about. It is made of staybrite metal or bakelite, and is finished with a thick curved rubber-covered hand-grip, under which is the switch for controlling the current. Sometimes a crossbar is used to form the handle.

C. The flex.

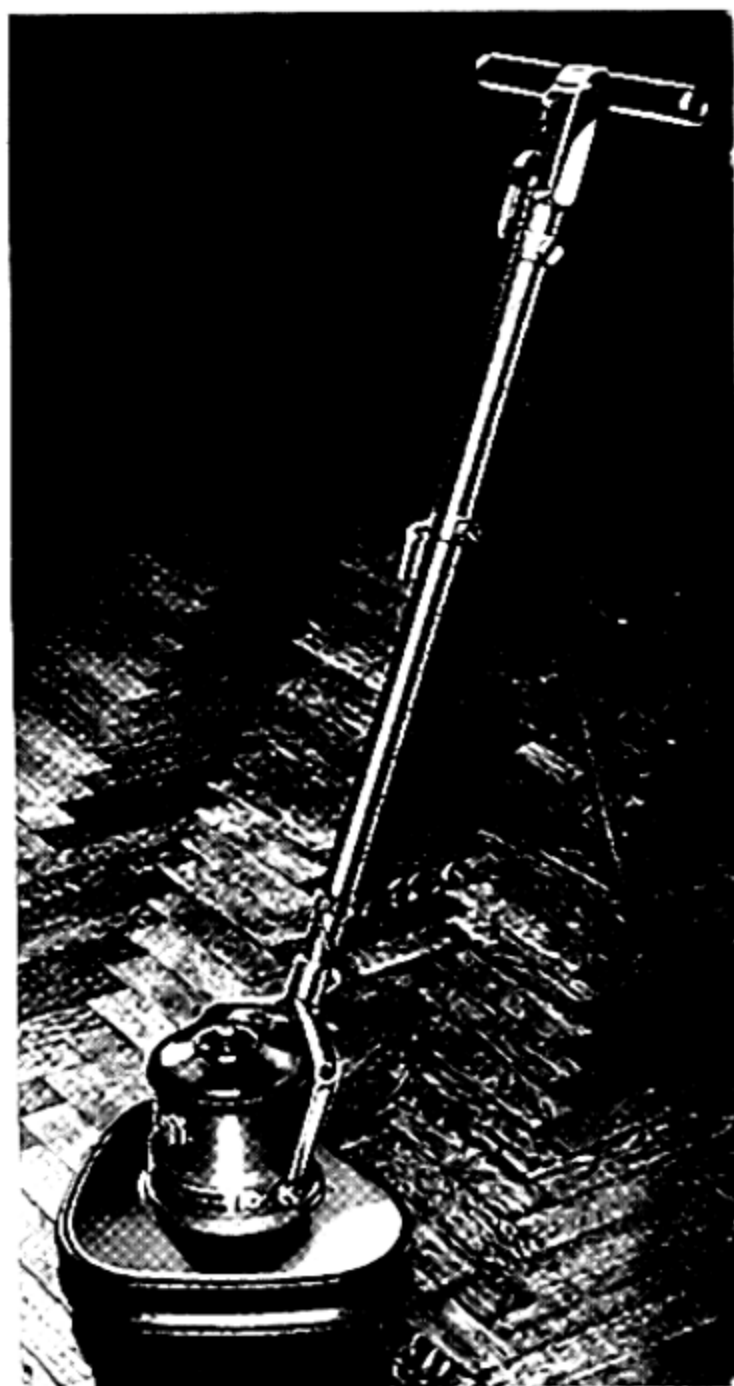
D. The plug.

To use a Floor Polisher

- (i) Prepare the floor by sweeping. This must be done very thoroughly and all surface dust removed.
- (ii) If muddy, the surface must be 'dry scrubbed' to remove the mud, and afterwards the floor must be swept again.
- (iii) If the mud-marks are very few, they can be wiped off with a damp floor-cloth.
- (iv) For daily cleaning rub up the surface only, using the second set of brushes, and finish with the set of polishing felts.

NOTE. The second set of brushes will have less polish in them than the first set, and therefore will be more suitable for rubbing up.

- (v) For weekly cleaning, prepare the floor as for daily cleaning. Spread or sprinkle the floor-polish very thinly. Rub the polish well in, using the first set of brushes. Polish, using the second set of brushes, and finish with the felt pads.
- (vi) Work evenly and smoothly, and do not move the polisher too quickly over the floor surface



ELECTROLUX LTD

ENAMEL-WARE

This is found in the form of bowls, buckets, jugs, cans, housemaid's boxes, and small pieces of kitchen equipment such as colanders and canisters. Tin or thin iron is used as a foundation, covered with a layer of enamel of varying thicknesses. Originally enamel-ware was always white in colour, but it can now be obtained in various pastel shades. These different colours can be made use of in large institutions in that they enable the equipment of one wing, block, or floor to be kept entirely separate from any other; and in small buildings the different colours enable the equipment for special purposes to be kept separate.

Choice

- (a) Select good quality utensils, with handles firmly bolted in position.
- (b) Utensils of a reasonable weight will wear better and dent less easily than those of lighter make.
- (c) Medium-sized utensils are the most convenient to use. They will not cause undue physical strain when lifted full of water.
- (d) Medium-sized utensils fit conveniently into sinks.

Cleaning

- (i) Wash thoroughly with warm soapy water. If necessary using a cleaning powder.
- (ii) Rinse thoroughly with clean hot water.
- (iii) Dry thoroughly.
- (iv) Store upside down if possible.
- (v) If very dirty, clean by wiping with paraffin, followed by very thorough rinsing and drying.

Care

- (i) Clean and dry thoroughly.
- (ii) Avoid banging or knocking the surface, as this will cause the enamel to chip off, or crack. In time this will expose the foundation metal, which will rust on exposure to moisture and air.

NOTE. Many articles which in the past were classed as enamel-ware are now being made from rubber, and research has produced a new development in rubber compounding which has opened up a wide range of possibilities. This compound possesses the flexibility of rubber, allied to the strength and rigidity of a phenolic-resin. These rubber-phenolic-resin compounds are light and flexible, strong and quiet in use. They are rather more costly than the

corresponding enamel-ware articles, but this is offset by the longer service life.

The surface is smooth and glossy; it is therefore easier to clean and more hygienic. It is almost unbreakable, and will not crack, rust, or stain, and the smoothness of the surface cannot scratch the most delicate surface. The shape of the article is retained indefinitely. Articles can be obtained in a variety of colours.

ADDITIONAL EQUIPMENT

Step Ladders

Every house should have a step ladder large enough to enable the housewife to reach easily up to the ceiling. A safety ladder should always be bought. This is self-supporting and gives perfect stability.

There are variations of this type of ladder:

(a) *Two-way step-chair*. A kitchen chair which can be converted into a small ladder, suitable for use in a kitchen to enable the worker to reach the high shelves of a kitchen cupboard. The chair when converted makes a three-tread ladder.

(b) *Step-stool*. A kitchen stool which can also be used as a three-tread ladder.

(c) *Folding platform steps*. These are so arranged as to have a small platform at the top on which the worker can stand.

(d) *Tripod step ladder*. This has a special arrangement of a hook on which it is possible to hang a bucket. This is advantageous when spring cleaning, washing high windows, etc.

Kneeling Mats

The best types are those made from rubber. They are easily cleaned, resilient, damp-proof, and very comfortable to kneel on.

Brush Racks or Tidies

These are extremely useful for the storing of brooms and brushes. They can be either (a) home-made, or (b) bought ready-made. The home-made ones are very simple, consisting of a piece of boarding into which are fixed pairs of pegs at suitable distances from each other, the space between two pegs being large enough to take a broom-handle. The pegs may be turned wooden pegs such as were used in the past for hat racks: large screws or long nails driven through the centre of empty cotton reels can also be used. Hooks may be screwed into the board at various intervals, and from these may be hung smaller brushes, mops, etc.

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A judicious arrangement of pegs and hooks will enable a very large number of brooms, brushes, and mops to be kept tidily in place on a brush rack. The ready-made racks, of wood or enamelled iron, are similar in construction to the home-made ones.

Brushes for personal use

Under this heading can be classed hair, nail, and tooth brushes.

Hair Brushes

A. *The back and handle* can be made from a variety of different substances—solid silver, silver plate, tortoise-shell, ivory, enamel on silver and other metals, various fancy substances finished in various ways, and wood usually finished by wax-polishing, spraying with paint, enamel, or cellulose, or varnishing. Imitations of all the more expensive substances are also made.

The shape and size of hair brushes vary considerably, and they are often sold in pairs.

Men's hair brushes are handleless, and the bristles are somewhat shorter.

B. *The brush* is usually made from bristle—which may be white or black—whalebone, nylon, or rubber. Babies' hair-brushes are usually made from goats' hair. The tufts of bristle, whalebone, or nylon are usually fixed to the wooden stock by wiring, but in very cheap brushes they may be fixed by some adhesive. When rubber is used the stock and brush are moulded in one piece.

In some types of brushes, the black bristles and lengths of wire are fitted to a pneumatic pad of rubber which is inserted into the brush head.

Cleaning

A. *The back and handle* should be cleaned and if necessary polished according to the substance from which it is made. For polished and varnished wooden surfaces a little furniture polish, furniture cream, or vaseline should be rubbed on, to prevent the surface from becoming water-marked.

B. *The brush*

- (i) Comb thoroughly to remove all bits of hair, tap the brush sharply on a piece of paper to get rid of loose dust. Screw up the paper and burn.
- (ii) Wash the bristles by beating the surface of
 - (a) Warm soapy water.
 - (b) Warm water and a soapless detergent.

- (c) Warm water and ammonia. Allow 1 tablespoonful of ammonia to a bowl or hand-basin of water.

NOTE. Avoid splashing the head and handle. Use a sufficient depth of water to prevent the bristles from banging on the bottom of the bowl.

- (iii) Rinse thoroughly in warm water. For bristle and whalebone rinse finally in cold water to stiffen.
- (iv) Dry by patting on a bath-towel, and finish drying in a current of warm air, or at an open window. The brush should be so placed as to allow the water to drain away and not to soak into the brush head.

NOTE. It is practical to wash hair combs at the same time as hair brushes. They are made from a variety of materials but mainly those of the plastic group. They should be washed in the same water, scrubbed lightly with a nail brush, rinsed, and dried with a bath towel.

Clothes and Hat Brushes

These are frequently part of a dressing-table set of brushes, and the clothes brush is usually stiffer and wider than the hat brush.

The brushes are cleaned in the same way as the hair brushes.

Nail Brushes

The head is usually plastic, although occasionally rubber or varnished wood may be used.

The brush may be of white or black bristles or synthetic substitutes for bristle or may be of nylon or rubber.

Cleaning

- (i) Rinse thoroughly after use, first in hot water and finally in cold water.
- (ii) If possible dry in the open air, which will sweeten the brush and help to stiffen the bristles.

Tooth brushes

The head and handle is usually of plastic: and the *brush* can be of bristle, bristle substitute, or nylon.

Cleaning

As for nail brushes. Occasional rinsing in disinfectant is useful, particularly during times of epidemics.

CHAPTER VIII

CHOICE, CLEANING, AND CARE OF GLASS AND CHINA

GLASS

THIS is used for very many purposes in a modern house:

- (a) Table and bedroom glass.
- (b) Flower-vases and flower-bowls.
- (c) Cooking utensils.
- (d) Windows.
- (e) Plate glass for protective purposes, e.g. the tops of dressing-tables. Also for making shelves in bathrooms, above fitted hand-basins, etc.
- (f) Mirrors.

Manufacture of Glass

It cannot be stated with any certainty when and where glass was invented, but it was made by the Egyptians and Phoenicians in very early days, long before the peoples of Europe emerged from barbarism. The Romans brought the art of glass-making to Britain and examples of their work are to be seen still in museums. The Anglo-Saxons were also important glass-workers. Glass is now manufactured in many different ways from a variety of materials, of which the principal are sand, soda ash, and lime.

Types of Glass

A. *Plate Glass.* The materials for making this type of glass must be as pure as possible, in order that the glass may be smooth enough to need the minimum of grinding and polishing afterwards. The ingredients are melted and mixed in large fire-clay crucibles which, after heating, are taken to a special table on to which the molten glass is poured. A heavy iron roller is used to reduce it to the required thickness, after which it is cooled and annealed very carefully. It is then ground and polished.

B. *Sheet Glass.* This is now blown by compressed air, which produces a more uniform thickness. The glass is blown into a cylinder, which is then cut lengthwise and the glass allowed to soften slowly on a smooth stone slab, on which it is slowly flattened out by means of a roller. The molten material from the furnace has thus been

blown into a cylinder and finally flattened into a sheet suitable for glazing windows.

C. *Special Window Glass*. The value of sunlight is now fully appreciated, and modern houses are so built as to allow the entrance of the maximum amount of sunlight. Ordinary plate and sheet glass, as used in the past, was found to be impervious to the ultra-violet ray, the most health-giving and valuable sun-ray. A glass has now been invented which allows this valuable health-giving ray to pass through, and has been given the trade name of Vita Glass.

D. *Blown Glass*. The important process of 'blowing' is used to produce hollow glass-ware. Originally the work was done by human power; now it is done by means of electrically controlled compressed air.

E. *Moulded Blown Glass*. The moulds used are almost always of cast-iron and are hinged. The requisite amount of glass is partially blown, and then lowered into the mould, which is tightly closed, and the final blowing is then given.

F. *Pressed Glass*. Pressing is used for thick-walled articles such as dishes, tumblers, jars, etc. A charge of glass is poured into a mould and a plunger brought down into the mass, pressing it into all parts of the mould. A glass which is soft, and not too quick in setting, must be used for this process. The moulds may be plain, or may bear a more or less intricate pattern.

G. *Obscured Glass*. This is placed where light, but not transparency, is required. Sheet or plate may be used, one side of which is left unpolished and rough, or it may have one polished surface, and one which has a pattern rolled into it.

Decorating Glass

This may be done in various ways:

(a) *Glass cutting*. After the article has been shaped, a design or pattern is cut on the surface by means of a diamond, or a rapidly revolving wheel which is constantly supplied with emery powder and water. The tracing is always done by hand, which results in very slight unevenness in the pattern.

(b) *Imitation cut glass*. This is produced by pressing the glass into a specially prepared mould, which produces a 'cut glass' pattern. In this case the edges are not so sharp, and the pattern is mechanically even. The small ridges left by the hinges of the moulds can also be seen.

(c) *Etching*. This process produces designs on the glass surface by means of hydrofluoric and sulphuric acids. The object to be

decorated is covered with protective wax in which the design is traced with a special needle-like instrument. The prepared specimen is then placed in the etching bath until the fluid has penetrated to the depth desired. Finally the wax is removed, leaving the surface of the object decorated with the design.

(d) *Engraving*. This form of decoration is produced by rotating copper wheels, the edges of which are fed with oil containing fine emery powder.

Table Glass

✓ Choice

- (a) It should be a good colour.
- (b) There should be no faults or flaws.
- (c) Select a pattern which may be easily matched, in case of breakages.
- (d) Choose simple designs and forms, which are most easily cleaned.
- (e) Good quality moulded glass should be bought for everyday use. It should be bright, smooth, and well finished inside.
- (f) Glass jugs used for holding drinking water should be of a design which enables the inside to be easily cleaned and dried.

Cleaning

- (i) Collect the glass on a tray, empty away any liquid which may remain.
- (ii) Glasses which have contained milk should be rinsed and filled with cold water.
- (iii) Wine decanters should be half-filled with salt and vinegar, allowing two tablespoonfuls of salt to half a pint of vinegar.
- (iv) Wash the glass in warm water in a pulp bowl. This minimizes breakages. If an enamel bowl has to be used it should be protected by being lined with a folded cloth.
- (v) Use the fingers only, and wash one article only at a time.
- (vi) Rinse in clean warm water.
- (vii) Drain on a tray and dry with a clean linen glass-cloth, which should be free from fluff. Work as quickly as possible to prevent the glass from becoming smeary. Dry whilst the glass is still warm.
- (viii) Polish with a second linen glass-cloth or a chamois leather.

NOTE:

- (a) If a large amount of glass is being washed, it should be rinsed finally in cold water, and allowed to drain thoroughly before drying. The cold water does not evaporate so easily

as does warm water, and therefore the glass does not become smeary.

- (b) Old damask table napkins are excellent for drying and polishing glass. The smooth surface of the damask is entirely free from fluff.
- (c) Stains on bedroom water jugs are due to the deposits of chalk from the water. This chalky deposit can be dissolved by the use of an acid, such as vinegar.

To remove a Fixed Stopper in the Neck of a Decanter

- (a) Drop a little sweet oil round the junction of the stopper and the neck of the decanter; OR
- (b) Tap all round the neck of the decanter near the stopper using another glass stopper for the purpose; OR
- (c) Warm the decanter neck by either holding it near the fire or placing a warm cloth round it. This causes the outer glass of the neck to expand and so releases the stopper.

✓ *Care*

- (i) Buy glass which can be easily matched in case of breakage.
- (ii) Wash carefully, avoiding extremes of heat and the careless twisting of the stems of wine-glasses.
- (iii) When storing in a cupboard, keep turned downwards to prevent dust from settling in the bowls of the glasses.
- (iv) If the glass is to be stored for any length of time, each piece should be wrapped in tissue-paper.
- (v) Never store or carry one glass inside another.

Flower Vases and Bowls

✓ *Choice*

- (a) Avoid brightly coloured glass. The modern green, smoke- or amber-coloured glass can be used with very charming effects in many rooms.
- (b) The design should be simple, and should allow of easy cleaning and drying. The bowl or vase should also hold an adequate amount of water, and should be made with a firm base.

Cleaning

- (i) Empty and rinse thoroughly with clean water.
- (ii) If stained, fill with one of the following:
 - (a) Salt and vinegar, allowing two tablespoonfuls of salt to half a pint of vinegar.
 - (b) Well-washed tea-leaves and water.

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- (c) Small pieces of torn-up newspaper or blotting-paper and water.
 - (d) Sand and water.
 - (e) Sand and vinegar.
- These substances remove stains partly by means of friction and partly by solution.
- (iii) Wash thoroughly in warm soapy water, using a soft nail-brush if necessary for crevices and cut surfaces.
 - (iv) Rinse first in warm water, and finally in cold water. A few drops of vinegar may be added to the last rinsing water to produce a good polish.
 - (v) Dry thoroughly with a clean linen cloth.
 - (vi) Polish with a second linen cloth or a chamois leather.

NOTE. If there is any silver, e.g. a rim round a rose bowl, the silver should be cleaned and polished first.

Glass Cooking Utensils

These are made of specially prepared glass which is heat-resisting, hard, and durable. They have very many advantages over ordinary cooking utensils, the main ones being attractive appearance and the fact that food can be sent to table in the dishes in which it has been cooked.

Choice

- (a) Buy from a reliable and well-established firm. This will allow replacements to be easily made.
- (b) Do not buy the cheapest glass-ware. Remember it is going to be subjected to heat, and good quality only will give good service.

Cleaning

- (i) After use, place to steep:
 - (a) With cold water if used for milky or floury foodstuff.
 - (b) With hot water if used for greasy foodstuffs.
- (ii) Wash with hot soapy water, adding soda if the dishes are very greasy.
- (iii) Scour with steel wool, a saucepan brush, or a saucepan scourer.
- (iv) Rinse thoroughly with clean water.
- (v) Dry with a kitchen cloth.

Windows

It is essential that the maximum amount of light and sunshine should enter a dwelling-house, and this can only be accomplished if the window glass is kept scrupulously clean.

Types of Glass used for Windows

A. *Plate Glass*. A very heavy type of glass used mainly for shop windows. It is sometimes found in the windows of old houses.

B. *Sheet Glass*. Generally used for modern windows. It varies in thickness according to the size of the pane.

C. *Vita Glass*. See page 145.

Cleaning

(a) Daily

- (i) Dust the inside thoroughly with clean, non-fluffy dusters.
- (ii) Rub up with a linen cloth, a chamois leather, a pad of tissue-paper, or a pad of newspaper.

(b) Occasional

The frequency with which the outsides of windows are cleaned varies according to the position of the house and the time of year. The cleaning of the outside must be done very carefully to avoid accidents. Professional window-cleaners can be employed, but if this is not possible the housewife must do the work herself. The ground-floor windows present little difficulty. The windows of the upper floors should be cleaned from inside, and use should be made of special pieces of apparatus, such as a chamois leather pad on a long handle, which can be bought and used for the cleaning of the outside of windows. The insides of windows are usually cleaned weekly, as part of the weekly cleaning of the rooms.

- (i) Protect the floor with a dust-sheet or with sheets of newspaper.
- (ii) Dust the window, window-frame, and blind thoroughly. A ledge-brush may be used if necessary.
- (iii) If the outside of the window is to be cleaned it should be done first.
- (iv) Wash the paint-work of the window-frame.
- (v) Wash the inside of the glass with cold or tepid water, using a linen cloth, a chamois leather, or a pad of newspaper.
- (vi) For greasy windows such as may be found in a kitchen or scullery, a little ammonia may be added to the washing water.
- (vii) Begin at the top of the window and work downwards.
- (viii) Finish one pane at a time, remembering to clean the corners carefully.
- (ix) Methylated spirit may be used for removing stains.
- (x) Dry with a linen cloth or pad of newspaper.
- (xi) Polish with a chamois leather or a pad of tissue-paper.

Care of Windows

- (a) Never wash in frosty weather or in direct sunshine.
- (b) Clean regularly.

The cleaning and care of Vita Glass windows is exactly the same as for ordinary windows. See page 323.

Plate Glass

Used for protective purposes and for shelves. When used for covering the tops of dressing-tables, etc., the glass should be dusted daily, and rubbed with methylated spirit during the weekly cleaning. This cleans and removes any stains. Glass shelves in bathrooms should be dusted daily, and washed in warm soapy water, rinsed, and dried thoroughly during the weekly cleaning of the room.

Mirrors

These are generally made of plate glass or the best sheet glass, and may or may not be framed. To produce the reflection characteristic of a mirror the glass is coated with quicksilver, protected with a layer of paint, and in some cases a further protection in the form of a backing of wood. In good mirrors the edges are usually bevelled, that is, cut downwards and outwards, and then polished. Cheap mirrors are not bevelled, as the glass is not worth the trouble and the expense. The framework of mirrors varies in size and material. Polished wood is most often used, but occasionally metal, such as silver or copper may be used.

Cleaning

(a) *Daily*

- (i) Dust mirror and frame with a clean duster.
- (ii) Rub up the mirror with a duster or a linen cloth.

(b) *Occasional*

- (i) Dust thoroughly.
- (ii) Clean the frame according to the wood or metal of which it is made.
- (iii) Clean the mirror by washing with tepid water, using a linen glass-cloth or chamois leather. Work very carefully, avoid making the mirror too wet, or allowing the water to get in between the glass and the frame. Methylated spirit is sometimes added to the washing water and occasionally methylated spirit alone is used for cleaning the mirror.
- (iv) Dry thoroughly and polish with a pad of tissue-paper.

Safety Glass

This is used for the windscreens of cars, and for the making of spectacles and goggles to be worn during ball games. The danger of broken and splintering glass has always been considerable, but it has now been overcome in two ways:

- (a) By embedding special wire-netting in the glass.
- (b) By preparing a 'sandwich,' consisting of two sheets of glass with a layer of celluloid between. This is often known as laminated glass.

Cleaning

As for ordinary glass.

Perspex

This is the trade name given to acrylic resin sheet which can be obtained either plain or corrugated, and is occasionally used in place of glass in certain windows such as ceiling lights, etc. It is light in weight, easily worked, and has a high light transmission. It has a very high safety factor and is tough rather than brittle. It is difficult to ignite except from the edges, it then burns very slowly, and the flame is easily extinguished. There is no risk of spontaneous combustion.

It is cleaned as for glass, but organic solvents should not be used.

CHINA

Various forms of china are used in a house.

A. **Earthenware.** This is glazed inside and is used for making such things as bread-crocks, etc.

B. **Stoneware.** This is an improvement on earthenware. It is heavy and thick and stands a considerable amount of hard wear, hence it is useful for kitchens, etc.

C. **China and Porcelain.** These are made from very special types of clay. The name 'china' comes from the country in which its manufacture has been understood and perfected for centuries. Real or 'true' porcelain is generally very thin and delicate, and when held up to the light it is possible to see the form of the fingers through the cup or saucer which is being held.

D. **Artificial Porcelain.** This is the substance used for the making of the 'china' used in the ordinary house, e.g. tea-sets, dinner-sets, etc.

Useful China

Choice

- (a) Buy a standard pattern and design. This enables breakages to be easily and quickly replaced.
- (b) Colour and design are matters of individual taste, but avoid extremes. Colouring should be quiet and subdued, and design should be simple and small.
- (c) Avoid flutings, intricate mouldings, ridges, and crevices as these are difficult to clean.
- (d) Lids of vegetable dishes, tea-pots, hot-water jugs should fit well.
- (e) Cups should be well balanced on the saucers, in the centre of which should be a depression to hold the cup firmly.
- (f) Tea-pots should have a well-curved spout, well finished off to facilitate pouring.
- (g) Handles of cups, jugs, etc., should be well formed, and easy to wash and dry.
- (h) Jugs should be made with wide necks to allow of thorough washing and drying.
- (i) For kitchen and larder use slightly imperfect goods may be bought, provided they are not cracked. Imperfections consisting of small chips, irregularity of shape, colour, pattern, or design will not mar the usefulness of plates and dishes when used in a kitchen or larder.

Cleaning

Work in a sink, or use an enamel bowl.

- (a) Empty cups, jugs, and tea-pot.
- (b) Scrape plates.
- (c) Greasy plates can be wiped with newspaper.
- (d) Pile like things together.
- (e) Milk jugs should be rinsed with cold water, filled, and left on one side to soak.
- (f) Bowls and sauce-boats which have contained milky or farinaceous foodstuffs should be rinsed with cold water, filled, and left on one side to soak.
- (g) Wash all china in hot soapy water. Use a cotton mop. This enables hotter water to be used, and protects the hands from constant immersion in hot water.
- (h) Begin with the cleanest things first, add more hot water if necessary, and add soda for the washing-up of greasy plates, etc.
- (i) Rinse all the china in hot water.

(j) Plates, dishes, and saucers can all be air-dried. After rinsing in hot water—about 160° F.—china dries very quickly by evaporation, thus saving much time, labour, and expense.

(k) Bowl-shaped things such as cups, etc., must be towel dried.

~~are~~ (a) China should be kept in a cupboard free from dust.

(b) Articles of a kind should be kept together.

(c) If space is limited, cups and jugs can hang on round cup-hooks placed at the back of the cupboard or on the edge of shelves.

NOTE. Avoid the use of square cup-hooks, as these tend to break off the handles.

(d) Plates should not be piled too high, otherwise the weight may cause the lower ones to crack.

(e) The shelves must be strong enough to bear the weight of china.

(f) New china can be soaked in cold water for twenty-four hours and then brought slowly to the boil. Allow the water to become quite cold before using the china. This process is supposed to harden the china and prevent it from cracking.

Ornamental China

This should be eliminated as far as is possible. That which cannot be eliminated should be kept in glass-fronted cupboards. In this way it is not exposed to dust, dirt, etc., and will not require daily dusting.

Cleaning

(a) Follow the ordinary method, but avoid the use of soda when washing gilded china.

(b) Always use a pulp bowl, as this minimizes breakages. As a substitute for a pulp bowl use an enamel bowl lined with a linen cloth.

(c) Wash one article at a time.

(d) A soft nail-brush can be used for corners or crevices in ornamental china.

CHOICE, CLEANING, AND CARE OF GLASS AND CHINA

NOTES

CHAPTER IX

CHOICE, CLEANING, AND CARE OF LEATHER AND OF FOOTWEAR

Leather is the skin of an animal, prepared specially to render it durable, supple, and smooth.

Manufacture of Leather

(i) The hides are steeped in water to soften them.

(ii) *Liming*. They are then placed for some days in pits containing lime and water. This loosens the hair, which is then scraped off with a blunt knife.

(iii) *Tanning*. The hides are then placed in pits and covered with an infusion of oak bark and water. This process is a long one and takes from six to nine months, and gives to the hides the characteristic durability of leather. This process can be speeded up by heating the liquor, and by mechanical means forcing it into the leather, but the wearing properties are considerably reduced when the time of the tanning process is shortened. Foreign leather is often made by this rushed method. The most flexible leathers are tanned with chrome, instead of oak bark.

(iv) *Currying*. In this process the leather is smoothed and pared down on the flesh side, or is split, if thick, into several layers. It is rendered soft and pliable, made waterproof, and given a surface finish. Waterproofing is done by allowing a mixture of tallow and cod oil to penetrate the leather gradually.

(v) *Tawing*. This is the treatment of skins by mineral salts, and is used for the preparation of glove leathers, and also for soft leathers for boots and shoes.

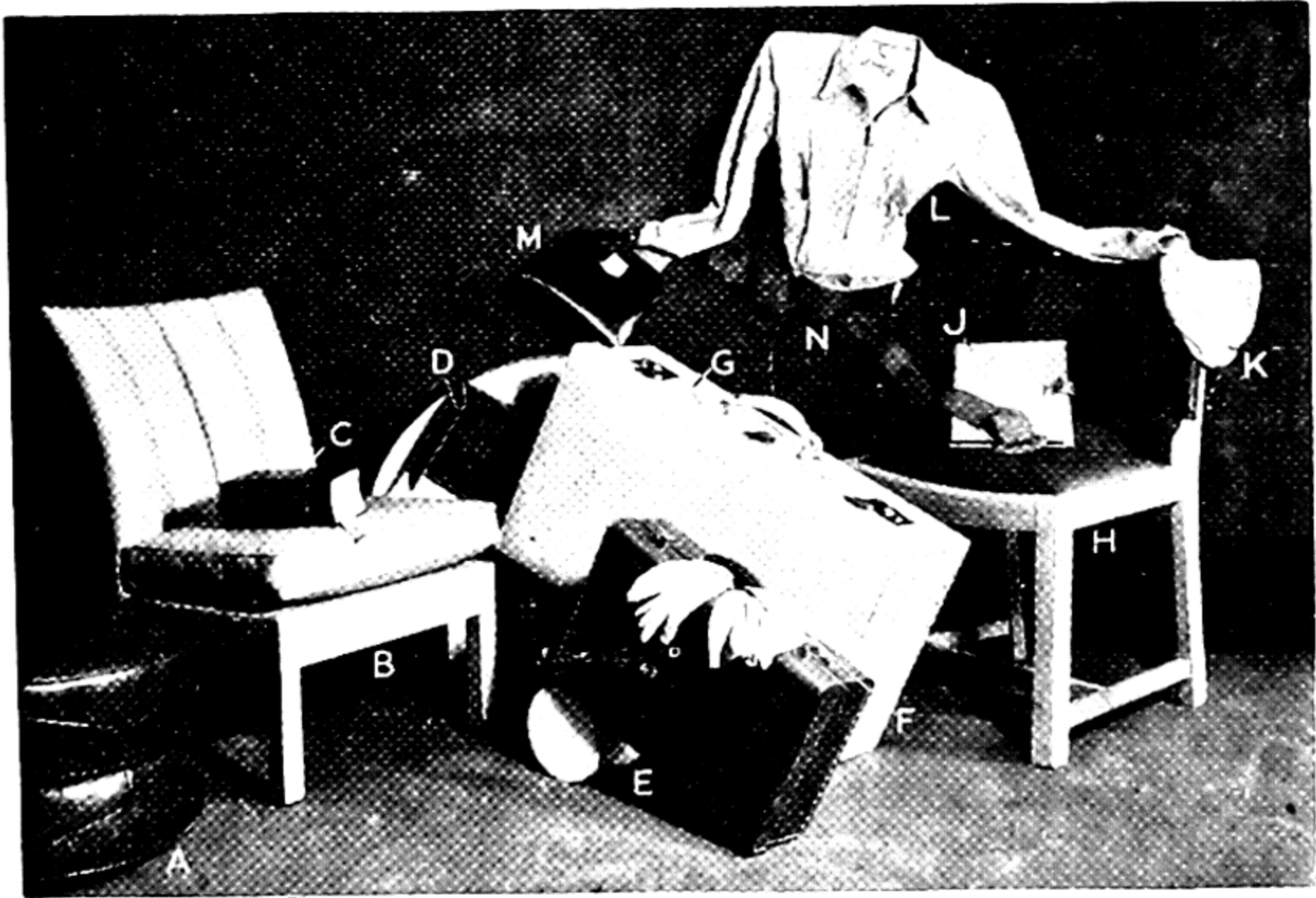
(vi) *Shameying*. This is an additional process used for making the leather very soft and pliable by soaking it with oil, and was originally used in the preparation of deer and chamois hides, hence the name of the process. Most leathers of this nature are now obtainable from split sheepskin, and are known as wash-leathers.

Uses of Leather in a House

Owing to its great durability, it is used mainly for:

- (a) Luggage.
- (b) Furniture.

- (c) Footwear.
- (d) Fancy articles, such as hand-bags, blotters, photograph frames.
- (e) Clothing, coats, gloves, etc.



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LEATHER GOODS FOUND IN A HOUSE

A. Hide floor cushion; B. Biscuit-coloured hide chair; C. Persian calf bound book; D. Morocco photo-frame; E. Pigskin attaché case; F. Suède gloves; G. Rawhide dressing case; H. Coloured hide chair seat and back; J. Tooled leather writing case; K. Suède hat; L. Suède jacket; M. Calfskin bag; N. Suède belt.

CLEANING AND CARE OF LUGGAGE

Hides used

- (a) Pigskin.
- (b) Cowhide.
- (c) Morocco, used for lighter luggage, such as dressing-cases.

Advantage of Real Leather Luggage

Real leather gives almost everlasting wear.

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Disadvantages

- (a) The initial cost is heavy.
- (b) The case is very heavy before it is packed.
- (c) Morocco soon gets shabby, because the surface easily becomes scratched and torn.

Cleaning of Luggage

This should be done periodically, depending on the amount of use to which the luggage is put. Careful, thorough cleaning is instrumental in prolonging the life of a piece of luggage.

- (i) Brush or dust the inside thoroughly. If lined with material and fitted with pockets, a vacuum cleaner or a clothes brush must be used.
- (ii) Polish any metal parts, such as locks, hinges, etc., according to the type of metal used.
- (iii) Dust the outside thoroughly, and wash with warm soapy water, using a net cloth.
- (iv) Rinse thoroughly, but avoid making the leather too wet.
- (v) Dry with a soft cloth and leave to dry completely in a draught or in a warm room.
- (vi) Polish with one of the following:
 - (a) Good furniture polish or cream.
 - (b) Beeswax and turpentine.
 - (c) Good shoe polish of the correct colour.
- (vii) Apply the polish with a rag, rub in well, and finish with two clean, soft dusters.

CHOICE, CLEANING, AND CARE OF LEATHER FURNITURE

Leather furniture is generally found in the form of large easy-chairs, with chesterfields to match. It is also used for covering the seats of dining-room chairs, stools, etc.

Hides used

- (a) Cowhide. This is very often shaved down thinly.
- (b) Pigskin.
- (c) Sheepskin. Cheapest and most durable.
- (d) Morocco. Used mainly for chair seats.

Cleaning

(a) Daily

Dust carefully and thoroughly, especially in the folds, and round any buttons, etc.

(b) Occasional

The frequency with which this cleaning is done varies according to the amount of use to which the furniture may be subjected.

- (i) Remove all surface dust, as in daily cleaning.
- (ii) If only slightly soiled, wipe over with a cloth wrung out of warm soapy water.
- (iii) If dirty, rub with a mixture of linseed oil and vinegar, allowing two parts oil to one part vinegar.
- (iv) If very dirty wash with warm soapy water, using a soft cloth. Rinse thoroughly and dry well.
- (v) Polish thoroughly, using one of the following:
 - (a) Good furniture cream or furniture polish.
 - (b) Good shoe cream, either brown or white.
 - (c) Beeswax and turpentine.
 - (d) Vaseline.

Apply the polish with a rag, rub in thoroughly, and finish polishing with two clean soft dusters. Good thorough rubbing will make the surface so dry that grease-spots or stains will not mark clothing.

NOTE. The polishes used supply the wax and oil which makes the hide supple and prevents it from cracking when in use. In all cases do not apply more than can be readily absorbed.

To remove Stains

Rub with a cloth moistened with petrol or turpentine.

Care of Leather Furniture

- (a) Avoid allowing over-exposure to the sun or to the direct heat from a fire.
- (b) If scratched apply a little leather stain, and when dry polish in the usual way.

NOTE. Leather stains can be bought at most Arts and Crafts shops.

CHOICE, CLEANING, AND CARE OF FOOTWEAR

Many different types of leathers are used for footwear.

A. For the Soles

The leathers used are cow, ox, or bull hides. Sheepskin split in half is used for making the thin inner sole.

B. For the Uppers

(a) *Plain or blacking leather*, from the hide of the kip or young calf. This is finished on the flesh side of the leather, and is a much harder type than any other leathers which are finished on the grain side, i.e. where the hair originally grew.



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FOOTWEAR

A. Boy calf brogue shoes; B. Rubber boots; C. Morocco leather slippers; D. Canvas and rubber tennis shoes; E. Suede afternoon shoe; F. Patent leather shoes; G. Buckskin shoes; H. Crocodile shoe; J. Glazed kid shoes; K. Willow calf riding boots.

(b) *Box or willow calf*, from bullock hides and calf skins tanned with chrome. Both types are very durable and suitable for making into hard-wearing shoes. Both are much finer and softer than blacking leathers.

NOTE. Many of the leathers known to-day get their names according to the treatments and finishes they receive. Box and

willow calf are examples. The 'box' is a form of graining which can be produced artificially on the calf skin, and box calf was originally only produced in black. A German—Cornelius Heyl—then produced a brown box calf, and 'willow' is the English corruption of the name he gave it. Box calf can now be tanned in many colours, so only brown is now called 'willow calf.'

(c) *Glacé kid*, from the goat and kid skins tanned with chrome. Soft, and suitable for children's wear, and useful for house slippers and summer wear.

(d) *Patent leather*, from calf or goat skins. It is produced by coatings of boiled linseed oil being poured on to a foundation of leather, the whole then being baked in stoves at a moderate heat. Cheap patent leather is often made from a foundation of canvas coated with japan black, which is then varnished. Patent leather is not porous and makes the feet hot, uncomfortable, and swollen, for which reason it should not be worn for long periods.

(e) *Morocco leather*, from goat skins. This is a fine leather, tanned with sumach, a type of small tree or shrub, the leaves of which are used for dyeing purposes. This type of leather originally came from the country of Morocco. French morocco is an inferior kind with a small grain. Levant morocco is a fine quality with a large grain. Persian morocco is a type finished on the grain (or hair) side. Imitation moroccos are produced from split sheep skins and calf skins.

(f) *Suède*. This has a characteristic dull, rough surface. It is very soft.

(g) *Buck-skin or doe-skin*, from the hides of deer. They are generally used for summer shoes, also for games shoes. They are very soft leathers and are not often dyed.

(h) *Various fancy leathers*, such as crocodile, lizard, snake, alligator, and other reptiles. At various times the hides of walrus, seal, antelopes, ostrich, camel, and elephant have all been dressed and used for making fashionable shoes.

Choice of Shoes

- (a) Buy good shoes. Cheap shoes quickly become shabby and lose their shape. The seams burst and so the shoes cease to be watertight.
- (b) The kind chosen should be suitable for its purpose. Box calf is good for hard wear, glacé kid for house or summer wear, etc.
- (c) The shoes should fit the foot, not vice versa. Tight shoes are most injurious as they interfere with circulation of the

blood, produce cold feet, chilblains, corns, and bunions. They also produce a very awkward gait, and cause much ill-health and suffering.

- (d) Toes should not be too pointed—but should lie straight and not be cramped or overlap. In many shops, by means of X-ray apparatus, it is possible to see the position of the toes in the shoe. Transparent plastic 'fitting shoes' are also made which when used enable the position and movement of the foot inside the shoe to be readily and easily studied.
- (e) Heels should not be too high, otherwise weak ankles will result. The weight of the body will be incorrectly poised and strain will be thrown on the parts of the feet which are ill-adapted for that purpose, i.e. the ball and toes of the foot. The heel of the shoe should be directly under the heel of the foot, in order to give proper support to the body. No natural grace of movement is possible if the foot is imprisoned in badly-shaped shoes.
- (f) Thin soles are much more tiring to wear than thick soles.
- (g) The inner lining should be creaseless.
- (h) The leathers used, particularly for the uppers, must be supple and durable.

CLEANING OF FOOTWEAR

Equipment required

A. *Brushes*. These are usually bought in sets and should be numbered or otherwise labelled on the back to prevent their being used for any other purpose than the right one:

No. 1. To remove dry dust and mud.

No. 2. To apply the polish.

No. 3. To rub the polish into the leather.

B. *Polish*. This may be either a liquid or a paste, and may be bought in a tin, tube, or jar. Many firms manufacture excellent shoe polishes which can be bought in black, white, and many shades and tones of brown, in addition to blue and green. Special preparations for use on reptile skins can also be used.

C. *Old flannel*, or rag, for applying the polish if a brush is not used.

D. *Dusters* for polishing.

E. *Vulcan Pad* for final polishing.

Method of Cleaning

- 1. Prepare the table or working surface by covering with sheets of newspaper.

- (ii) The shoes must be perfectly dry before being cleaned and polished. Leather should never be dried too quickly, or by being placed too near a hot fire, or in a hot cupboard, as these methods will cause it to shrink and to become hard.
- (iii) Shoelaces must be tucked well inside or held inside the shoes during the cleaning and polishing process, so that they do not become coated with polish.
- (iv) Remove dry mud. This may be done:
 - (a) By brushing with No. 1 brush.
 - (b) By scraping with a wooden skewer or piece of firewood.
 - (c) If very muddy the leather may be washed with warm soapy water, a floor-cloth being used. The leather must afterwards be allowed to become perfectly dry before being polished.
- (v) Apply a small quantity of polish, either with brush No. 2 or a rag. Rub in well, and do not forget the back of the heel and under the instep.
- (vi) Brush in the polish with No. 3 brush, remembering the back of the heel and under the instep.
- (vii) Polish with the duster and finish off with a velvet pad.

Cleaning of Special Leather

A. *Glacé Kid*. As this is only used for house shoes, and for very light summer shoes, it never becomes very dirty. Owing to the fineness of the leather a brush should not be used, as this would scratch the surface.

- (i) Dust thoroughly.
- (ii) Apply the shoe polish with a small piece of cloth. Rub in the polish very thoroughly.
- (iii) Polish with a duster, and finish with a velvet pad.

NOTE. Children's kid shoes are often white or pastel coloured. They should be cleaned in exactly the same way as ordinary kid, but white shoe cream must be used for polishing.

B. Patent Leather

- (i) Clean as for glacé kid; or
- (ii) Use vaseline instead of ordinary shoe polish; or
- (iii) Use olive oil instead of the vaseline.

C. Suède

- (i) Brush before and after wearing, to remove dust. Use:
 - (a) A clean clothes brush.
 - (b) A wire brush.
 - (c) A rubber brush.

The dust in the material causes the suède to become greasy. The

wire or rubber brush helps to raise the pile and to preserve the characteristic rough surface. Very fine emery paper can also be used for the same purpose.

(ii) If necessary apply suède dressing.

This is a suède dye in liquid form which can be applied either by means of a small sponge or brush. It restores the colour and the surface, and can be used when the suède is getting shabby. Some of the dyes come off and mark stockings or any light-coloured material with which the shoes may come into contact.

D. *Buck-skin and Doe-skin* (undyed)

(i) Brush off any mud or dust, using a stiff, clean brush.

(ii) Place trees inside the shoes.

(iii) Brush or wipe over the whole surface with one of the buck-skin dressings. This may be:

(a) One of the commercial preparations in creamy liquid form, put up in a bottle and supplied with a small sponge with which to apply the liquid.

(b) Blanco, mixed with sufficient water to make a creamy liquid, which can be applied with the small sponge supplied with each block of Blanco.

(iv) The leather sole and heel must be wiped clean of the whitening. This can be done with a wet rag or with the sponge well rinsed out.

(v) Place in the sun, a draught, or in a warm place to dry.

(vi) When quite dry, the surface may be lightly brushed to 'rough' the leather. This is not always done.

Goloshes and Wellington Boots

Although this type of footwear is not made of leather, it is practical to consider its cleaning in this chapter.

Method of Cleaning

(i) Wash off the mud with tepid or cold water, using a floor cloth.

(ii) Rinse with clean water, and dry with the floor-cloth.

(iii) The rubber may be polished with:

(a) Vaseline.

(b) Paraffin.

(c) Shoe polish.

Note. Heat ruins rubber, so avoid using very hot water, and avoid drying rubber footwear near a fire or other source of heat.

Evening Shoes

These are made from a variety of materials, chiefly silk; e.g. satin,

crêpe-de-chine, marocain, brocade, etc. They are also made of kid—both in pastel shades and covered with a layer of gold or silver paint.

Silk Shoes

Method of Cleaning

- (i) Brush gently to remove loose dust. Brush the way of the material.
- (ii) Remove any marks with petrol or benzine.

NOTE. When using petrol or benzine, do not work near a naked light, and dry the shoes in the open air.

Gold and Silver Kid Shoes

- (i) Before and after use, dust and rub carefully with a clean duster.
- (ii) Polish occasionally with a little white furniture cream or polish, applied with a soft cloth, and rubbed in well.
- (iii) Finish polishing with a clean soft duster.
- (iv) If very tarnished or rubbed special gold and silver kid dressings can be used. These are brightening liquids, which are painted over the shoes and allowed to dry.

CARE OF SHOES

- (a) Always keep them on trees, or stuff firmly with newspaper; evening shoes may be stuffed with tissue-paper.
- (b) If possible, have two pairs of walking shoes in use, and wear them alternately. The rest allowed to each pair lengthens the life of the shoes; it also enables the shoes to be thoroughly dried and aired between each wearing.
- (c) New shoes should be worn for short periods of time only to begin with, until the initial stiffness of the leather has worn off.
- (d) If possible keep shoes on a shoe-rack or shelf, and not in a closed cupboard.
- (e) Never dry the shoes quickly or too near the fire, otherwise the natural oil in the leather dries up and the leather becomes hard and porous.
- (f) Have the shoes repaired as soon as is necessary.
- (g) Evening shoes should always be kept in bags or boxes.
- (h) Silver kid shoes should be kept in black tissue-paper to prevent tarnishing. Special tissue-paper impregnated with tarnish-resisting chemicals can also be used.

Fancy Articles (such as hand-bags, etc.)

These are made from a variety of different leathers, including Russian leather, which has a characteristic smell and is brownish-red in colour. Periodic cleaning and polishing will do much towards keeping the articles in good condition, improving their appearance, and keeping the leather soft and supple.

Method of Cleaning and Polishing

Follow the ordinary methods, but for all articles which are going to be handled, use white furniture cream or white shoe polish. This prevents the soiling of hands or gloves.

Clothing (such as coats, hats, gloves, etc.)

This is usually made from suède, or soft smooth leathers which may be finely grained.

Method of Cleaning and Polishing

As for shoes and fancy articles.

NOTES

CLEANING AND CARE OF LEATHER AND FOOTWEAR • NOTES

CHAPTER X

CHOICE, CLEANING, AND CARE OF WALL COVERINGS

THE earliest wall coverings used in Great Britain were tapestry and wood panelling.

Tapestry

These hangings were used in the eleventh, twelfth, thirteenth, and fourteenth centuries, to give extra warmth and decoration to the cold grey stone walls of the castles and palaces belonging to royalty and the nobles of the country. The tapestries were very solidly made by hand, and therefore they resisted the wear and tear of the constant moving of great men who had various estates, castles, etc., but little gear, and who therefore moved their tapestries about with them from place to place. Owing to the expense of making, and the length of time required for this, only very rich persons could afford tapestries.

Most of the famous tapestries came from abroad, the earliest known being made in Arras, a town in northern France, which has led to the name 'Arras' being given to all wall-hangings of this type.

Tapestries were hung from wooden frames made to fit each piece, and allowing them to hang away from the walls. In this way it was possible for an enemy to be concealed behind the arras, and to move round the room unseen.

Other famous tapestries were woven at the factory of Les Gobelins—just outside Paris—which factory is still in existence and which was founded by Louis XIV (who ascended the French throne in 1643). Other famous tapestries were made in the Netherlands. The earliest of the Oriental carpets which were brought to Europe were used as hangings, because the unpleasant habits of the people in those days made it impossible for the carpets to be used on the floor.

Panelling

This was an improvement on the tapestries. It was fixed to the walls, and not moved about from place to place. The earliest forms of panelling consisted of small squares of wood joined together by moulding or beading. The smallness of the square was due to the

lack of carpenter's tools (as we know them), which prevented the working of very large pieces of wood. The timber used was mainly oak.

Modern Wall Coverings

These include:

- (a) Modern tapestries—canvas—hessian—and various other hangings.
- (b) Modern wood panelling.
- (c) Paper.
- (d) Distemper.
- (e) Whitewash.
- (f) Paint and enamel.
- (g) Tiles, and imitations.
- (h) Vitrified brick.
- (i) Synthetic wallings.

WALL-PAPERS

In the East wall-papers have been known and used for many hundreds of years, being originally hand-painted on rice paper, and mounted on wooden frames. In Europe wall-papers were first invented as inexpensive substitutes for the costly and sumptuous hangings of brocade, brocatelle, tapestry, stamped leather, and Genoese velvet used in the palaces of the great families of Europe in the sixteenth and seventeenth centuries. The oldest block-printed wall-paper known was found in Christ's College Hall, Cambridge, stamped on the reverse side of the proclamation of the accession of Henry VIII (1509).

Wall-papers were first produced in the form of small-sized sheets (12 in. by 16 in.), but in 1706 Fournier, a Paris merchant, pasted the sheets into a roll. In 1778 an edict of Louis XVI decreed that a roll should contain twenty-four sheets of paper, pasted end to end, making a roll of about thirty feet. The name and address of the maker was obligatory on the two end sheets. This was the standard roll of wall-paper until the metre system was adopted.

Types of Wall-paper

A. *Rough-surfaced Papers.* This type of surface is similar to setting-paper, and, for this reason, dust and dirt stick to it; therefore it is not very healthy and is not used to any great extent at the present time.

B. *Smooth-surfaced Papers.* This type is much more popular.

There are a great many different types of designs, which include imitations of chintz, wood panelling, canvas, etc.

C. *Sanitary Papers*. Suitable for use in nurseries, bathrooms, kitchens, etc., and all places where cleanliness is necessary. The paper may be bought ready varnished, or may be varnished when hung on the walls. The smooth surface prevents dust from adhering to the paper, and the varnished surface allows the paper to be washed.

D. *Washable Papers*. These are somewhat different from sanitary papers, as the surface is not varnished. During the manufacture the paper is specially toughened, which allows the surface to be successfully washed. The surface is dull, which makes the paper suitable for use in any room.

E. *Cottage Papers*. A cheaper type of wall-paper, with small patterns on it, suitable for small rooms. The design and colouring is often very poor.

F. *Embossed Papers*. The best-known are:

- (a) Anaglypta, which is made from paper pulp. The embossed parts being hollow.
- (b) Lincrusta. The embossed part is solid. It is waterproof and not absorbent, and is suitable for halls, dadoes, dining-rooms, etc.
- (c) Cameoid. This gives the appearance of wood panelling, or modelled plaster, at considerably less cost.

NOTE. A special paste is sold for fixing embossed papers to the walls, ceilings, etc., or ordinary paste made thicker can be used.

G. *Ceiling Papers*. These are usually thin and can be had in varying colours and designs.

H. *Friezes*. This is a decorated strip of paper placed at the junction of the wall and ceiling, or just below a picture-rail. It supplies a finish to the wall-paper. Friezes are sold by the yard, and can be had with either an even or an uneven edge. The margin which is always found at the edges has to be cut or torn off.

I. *Dadoes*. This term is used to describe the lower part of the wall, which is often covered with a darker material, e.g. paper, paint, canvas, or painted, embossed paper in order to protect the lower half of the walls from accidental knocks and scratches.

J. *Special Papers*:

- (a) Pitch paper, i.e. brown paper coated on one side with pitch. It is used for lining damp walls.
- (b) Lining papers for covering a rough or uneven wall. These may be had in either white or brown.

Choice of Wall-papers

NOTE. Wall-papers are never put on to new walls until the walls have had time to dry thoroughly; i.e. eighteen months to two years.

- (a) Wall-papers may form either the background to the contents of the room, or may be a decoration to the room. Except in a very large room a decorative wall-paper is very trying.
- (b) Consider the aspect of the room. For a north or sunless room, a paper with a cream, yellow, tan, or pink shade is good; for a sunny room, grey, white, green, or blue may be used.
- (c) Consider the size of the room. A large-patterned paper can only be used in a large room, a small-patterned paper can be used in both large and small rooms.
- (d) Consider the furniture, and the colour of any hangings, coverings, curtains, etc.
- (e) Buy a good wall-paper. Very cheap papers may contain arsenic in the dye, which only acts in the presence of moisture, and when liberated causes illness if breathed into the lungs. Blue fades very easily.
- (f) Consider the use of the room. Bedrooms, nurseries, studies, bathrooms, kitchens, all have certain types of papers suitable for them.

Buying Wall-papers

Wall-paper is bought by the roll, which **cannot be cut**. The width and length of the rolls vary:

- English: 21 in. wide; 12 yds. long.
- French: 18 in. wide; 9 yds. long.
- U.S.A.: 31 in. wide; $10\frac{1}{2}$ yds. long.

Cost of Wall-papers

This varies greatly, according to the make, colourings, pattern and design.

Amount of Wall-paper required to cover the walls of a given room.

When making this calculation remember:

- (a) That a roll of paper cannot be cut.
- (b) That a small-patterned paper is most easily matched at joins, etc., and therefore there is less waste.
- (c) A large-patterned wall-paper is extravagant and wasteful in the matching.

NOTE. Any pieces of wall-paper left over should be kept carefully and used for patching, etc., when and if necessary.

PAPER-HANGING

The hanging of wall-paper is well within the capabilities of the average housewife, provided she is patient, neat-fingered, and accurate. To obtain the finished result achieved by professional paper-hangers requires a certain amount of practice. When repapering the room the cost of labour is always much more than the cost of the paper.

Equipment required

Large table. Large old pair of scissors. Paste brush. Bucket of paste. Yard stick or tape measure. Clean dusters. Squeegee or flat brush for smoothing on the paper. Plumb-line. Step-ladder.

The Worker should wear an overall, and if papering a ceiling she should wear a cap.

NOTE. If no large table is available, then use a space on the floor, which should be covered with newspaper. If there is not sufficient space on the floor, then the walls must be pasted and the paper placed on the damp surface. The larger the scissors the more easily and the more quickly will the paper be cut. Paste brushes vary in size and cost, and can sometimes be hired from paper-hangers' shops.

Preparation of the Room

- (i) Remove as much of the furniture as is possible.
- (ii) Remove the carpet, or fold it up and cover with newspaper.
- (iii) Place the remainder of the furniture in the middle of the room and cover with dust sheets.
- (iv) Have the chimney swept.

Preparation of the Walls

- (i) Thoroughly dampen the old wall-paper, using cold water and a cloth or clean whitewash brush.
- (ii) Strip off the old paper, using:
 - (a) The proper scraping tool; *or*
 - (b) An old wooden ruler; *or*
 - (c) An old blunt knife.
- (iii) Wash and rinse down the walls if necessary.
- (iv) Allow the walls to become quite dry.

NOTE. (a) If the walls are poor, rough, or uneven they can be covered with a thin white lining paper.

(b) If the wall is damp it may be lined with a damp-proof paper.

- (c) New walls are never papered for the first few months, in order that they may first dry out. Before being papered for the first time they should be coated with a solution of size, which fills up the pores of the plaster. Allow $\frac{1}{4}$ lb. of size, dissolved in a quart of water.

Wall-paper Paste

This may be:

- (a) Home-made.
- (b) A commercial preparation.

Home-made Paste

Ingredients:

- 6 oz. flour
- 1 quart cold water
- 2 teaspoonfuls of alum.

Method

- (i) Mix the flour and cold water very carefully, taking care to prevent the formation of lumps.
- (ii) Bring the mixture to the boil and boil for three minutes, stirring carefully.
- (iii) Add the alum, which acts as a preservative.
- (iv) Allow the paste to become cold before using. It will thicken on cooling.
- (v) If necessary thin down the paste, using hot water. The paste must be thin and should spread easily.

NOTE. A few drops of Sanitas can be used as a preservative instead of alum.

Commercial Pastes

The best of these consist of powders which only require mixing with cold water to be made ready for use. They are quick and very successful.

Preparation of the Wall-paper

- (i) Cut off the margin from one side of the paper only. The margin merely acts as a protection to the patterned part of the paper. To do this easily, sit on a chair and hold the roll on the ankles. Cut with the right hand and roll up with the left the paper as it is prepared.
- (ii) This cutting can sometimes be done in the wall-paper shop by means of a small machine.
- (iii) Measure the height of the walls, and cut off the lengths of paper required.

- (a) For plain papers allow two to three inches extra.
- (b) For small-pattered papers allow six to eight inches extra for matching the pattern.
- (c) For large-patterned papers allow eight to twelve inches extra for matching the pattern.
- (iv) Lay the strips face downwards on the table, or on the floor, both of which should be covered with newspaper.

Fixing the Paper to the Walls

- (i) Have everything ready.
- (ii) Paste the first strip, fold the ends lightly over to the centre, thus covering up the pasted surface. The strip is much easier to handle, being half its original length, and the pasted surfaces are covered up.
- (iii) Open out and hang the strip, starting from the top and working downwards, smoothing the paper into position by means of a clean cloth or a soft clean brush.
- (iv) The first piece should be 'plumbed,' to get it perfectly straight. This should be done whilst the paper is being smoothed into position. A plumb-line is not usually found in a house, so as a substitute use a piece of string with a weight tied to the end.
- (v) Trim off the extra pieces of paper at top and bottom of the strip. Make a fold at the required line, pull the paper forward, and cut with a pair of scissors.
- (vi) See that each succeeding piece of paper covers the margin of the previous piece and that the pattern matches.
- (vii) Start at the windows and work round the room.

Patching of Wall-papers

This may be required if the paper has become torn or splashed. The pattern should be carefully matched and the new piece torn gently to the required size. This leaves an irregular and fine edge, which is hardly noticeable when pasted on the walls.

DISTEMPER: WHITEWASH: COLOUR-WASH

These are very closely allied, distemper being an improved and coloured form of whitewash.

Whitewash is slaked quick-lime reduced to the consistency of milk by the addition of water. Glue or size is added to prevent the coatings from rubbing off and is known as a 'binder.'

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Distemper in its simplest form consists of the same substances, with the addition of colouring matter.

Uses of Whitewash and Distemper

A. *Whitewash* is used for all ceilings and also for the walls of sculleries, larders, pantries, basements, cellars, etc. It reflects light, and is therefore useful in basements and dark passages and corners; it is cheap and can easily be renewed.

B. *Distemper*. This can be used for the walls of all kinds of rooms. It can easily be renewed, is a cheap form of wall covering, and can be obtained in many artistic colours.

Distemper

This is sold in various forms:

- (a) A thick paste.
- (b) A jelly.
- (c) A dry powder.

In each case petrifying liquid must be used to produce a consistency suitable for brushing on to walls. Water can be used for this purpose, but is not very successful. Petrifying liquid produces a hard surface, which is lasting.

Colours used in Distemper

The pigments used for colouring distemper must be permanent to light and perfectly fast to lime and alkalis.

Distempers may be used with Two Forms of Finish

- (a) Smooth and rather shiny.
- (b) Matt finish.

Kinds of Distemper

- (a) Non-washable. Cheap and not very satisfactory.
- (b) Washable. This is the better kind, is most satisfactory, and wears well.

Choice of Distemper

Colour slips or colour cards are supplied, but a small slip of colour appears much lighter in tone than the complete walls of a room. Wet distemper is always several shades darker than it will be when dry.

Amount of Distemper required

For the walls of an ordinary-sized room, allow two tins of 7 lb. A amateur is not capable of making a given quantity of distemper cover as large an area as can an expert worker.

Distemper Brushes

These should be at least six inches wide and are usually made in two knots. They are expensive to buy, but it is sometimes possible to hire them.

Wall Scrapers

The blades vary in width and also in price, and are used for scraping off the old distemper.

Method of applying Distemper

- (i) The walls must be thoroughly washed down, clean and free from old distemper.
- (ii) All indentations and cracks must be made good with cement or plaster of paris.
- (iii) Allow the walls to become quite dry.
- (iv) Dip the tip of the brush-hairs in the prepared distemper and begin at the top of a wall, in one corner.
- (v) Work fairly rapidly as the distemper dries quickly. No edge of distemper should be allowed to dry.
- (vi) After the first coat has dried thoroughly it may be found necessary to apply a second coat.

NOTE. In institutions, large wall surfaces are covered by spraying on the distemper. This is done very quickly, easily, thinly, and more cheaply as less labour is required.

Stippling

Distempered surfaces are often stippled or dabbed whilst still wet with a special soft-haired brush known as a 'stippier.' By this process all brush marks are removed and the surface given a beautiful matt, velvet-like appearance.

Outside Distempers

For outside walls, only those distempers should be used which have been specially made for the purpose. This type of distemper does not last very long.

Whitewash

Preparation of Ceiling or Walls

- (i) Wash off the old whitewash, using an old cheap whitewash (or scrubbing) brush and warm water, with the addition of soda if necessary.
- (ii) Cracks should be filled up with cement or plaster of paris mixed with cold water.

Preparation of Whitewash

Ingredients

- 12 lb. whiting
- 12 oz. size
- 2 squares of laundry blue.
- Cold water.

Method

- (i) Place the whiting in a large bucket, cover with cold water and leave for twenty-four hours.
- (ii) Add enough cold water to the size to make a thick cream, and then add enough boiling water to dissolve the size.
- (iii) Powder the block of laundry blue.
- (iv) Add the blue and the size to the whiting, and stir very thoroughly.
- (v) Add sufficient cold water to make the whitewash of a suitable consistency.

To apply Whitewash

- (i) Use the tip of the brush only, and keep the work moist—so work with the windows shut.
- (ii) Brush-marks are made when the work is allowed to dry, and then wet material is put alongside.
- (iii) Wipe up any splashes which may be made whilst working.

NOTE. When decorating a room, whitewash or paper the ceiling before the walls.

Limewash

This is used for the walls of stables, dairies, out-houses, etc.

Preparation of Limewash

- (i) Large lumps of quick-lime are placed in an old bucket and covered with cold water. (The mixture has a caustic action and burns.)
- (ii) Stir the mixture with a piece of stick until it is of a suitable consistency.
- (iii) Apply with an old brush.

NOTE. Do not get splashes on hands or skin, and do not let children come near it.

PAINT AND ENAMEL

When used as a wall covering, oil paint or enamel both produce a hard, smooth surface which can be successfully washed and disinfected and which is not affected by heat or steam.

Preparation of the Wall

- (i) Remove the old paint. This can be done by:
 - (a) Using a blow-lamp.
 - (b) Scrubbing the paint with strong hot soda water, and rubbing with pumice-stone or sand-paper.
- (ii) Wash the walls.
- (iii) Fill in cracks with cement or plaster of paris.
- (iv) Allow the walls to become quite dry.

Method of applying Paint

- (i) Buy a good brand. Stir it up thoroughly before using.
- (ii) Thin down with turpentine.
- (iii) Apply very thinly
- (iv) Let each coat become perfectly dry before the next is applied.
- (v) Four very thin coats look much better than one thick coat.

TILES

Glazed tiles are used as a wall finish for bathrooms, lavatories, and kitchens, and for surrounding a fire-place. They are easily cleaned and pleasing in appearance and make a very hygienic surface.

Plastic, self-adhesive wall tiles are now available and are easily affixed to walls.

SPECIAL COMMERCIAL WALL COVERINGS

These consist of two types:

- (a) Ready-prepared sheets of specially prepared substance which are coloured with attractive pastel colours and finished with a highly glazed surface. They are frequently veined to imitate marble.
- (b) A specialized form of cement which is rendered direct on to the brickwork of a room. At least ten days must be allowed for the substance to harden and mature, after which it is colour-sprayed.

SPECIAL CLEANING OF
NOTE. This is usually

Wall Covering	Apparatus and Equipment required
A. <i>Enamel</i>	See Special Cleaning of Enamel, page 16
B. <i>Paint</i> (i) Dark (ii) Light	See Special Cleaning of Dark Paint, page 16 See Special Cleaning of Light Paint, page 16
C. <i>Synthetic Wall Coverings</i>	Wall brush Cornice brush, <i>or</i> Long-handled, soft-haired sweeping brush, covered with a clean duster, <i>or</i> An electric vacuum cleaner Warm soapy water Clean warm water Cleaning powder Net cloth, <i>or</i> linen cloth Clean, dry linen cloth
D. <i>Tapestry</i> (i) <i>Antique</i>	Soft clean clothes brush, <i>or</i> Electric vacuum cleaner
(ii) <i>Modern, including canvas, hessians, etc.</i>	As for antique tapestry To remove spots and stains use benzine or petrol
E. <i>Tiles</i>	Wall brush Cornice brush, <i>or</i> Long-handled, soft-haired sweeping brush, covered with a clean duster, <i>or</i> Electric vacuum cleaner Bowl of warm soapy water Clean warm water Soft dry linen cloth. Cleaning powder for removing stains

WALL COVERINGS

done during the spring cleaning

Weekly Cleaning	Special Cleaning
(i) Remove the surface dust with the wall brush and cornice brush, <i>or</i> the long-handled sweeping brush, <i>or</i> the electric vacuum cleaner (ii) Wash off any dirty marks by using warm soapy water, and the net or linen cloth (iii) If the marks are very obstinate, use a little cleaning powder (iv) Rinse thoroughly with clean warm water (v) Dry with a linen cloth	As for weekly cleaning, but the whole surface should be washed
If time permits, remove the surface dust by brushing gently, <i>or</i> using the electric vacuum cleaner	(i) As for weekly cleaning, <i>or</i> (ii) Have the tapestry taken down and dry cleaned professionally
As for antique tapestry	(i) As for antique tapestry (ii) Remove spots or stains by gently rubbing with petrol or benzine
(i) Remove surface dust as for C. (ii) Wash with warm soapy water, using the net cloth (iii) If very dirty, use the cleaning powder (iv) Rinse with clean warm water (v) Dry with the linen cloth NOTE. In some places, e.g. behind a fitted hand basin in a bedroom, or behind a sink in a kitchen, this work will have to be done every day	As for weekly cleaning

SPECIAL CLEANING OF
NOTE. This is usually

Wall Covering	Apparatus and Equipment required
F. <i>Wall-paper</i> (i) Rough or smooth surfaces	Wall brush Cornice brush, <i>or</i> Long-handled, soft-haired, sweeping brush covered with a clean duster, <i>or</i> An electric vacuum cleaner Two soft clean dusters For removing stains: (a) Large, soft india-rubber (b) Crumb of a white loaf (c) Stiff dough made of flour and water
(ii) Sanitary, washable or varnished surfaces	Wall brush Cornice brush, <i>or</i> Long-handled sweeping brush covered with a clean duster, <i>or</i> Electric vacuum cleaner Two clean soft dusters Tepid water Borax Net cloth Soft, dry linen cloth Leather
G. <i>Wood panelling</i> (i) Antique	See Special Cleaning and Polishing of Woods, page 18
(ii) Modern	See Special Cleaning and Polishing of Woods, page 18

WALL COVERINGS (cont.)

done during the spring cleaning

Weekly Cleaning	Special Cleaning
(i) Dust and cover up all large pictures which cannot easily be taken down. The covering can be done with a dust sheet, a clean duster, or a sheet of newspaper (ii) Dust and take down all small pictures, photographs, etc. (iii) Remove the surface dust as for C. (iv) Any specially dirty marks, e.g. round the electric light switch, can be removed by rubbing with: (a) Large soft india-rubber (b) Crumb of a white loaf (c) Stiff dough made of flour and water NOTE. Because of the rough surface great care must be taken not to make it rougher	(i) Prepare the walls and remove surface dust as in weekly cleaning (ii) If dirty, the whole surface must be cleaned with one of the cleaners NOTE. Work very gently
(i) Remove the surface dust from the walls as for rough-surfaced papers (ii) Wash the most soiled parts, e.g. round the sink, round the electric light switch, etc., using tepid water and borax. Allow one tablespoonful borax to one quart water (iii) Rinse thoroughly (iv) Dry gently with the soft linen cloth (v) Rub up with a leather or a soft clean dry duster	As for weekly cleaning, but the whole surface must be washed

CHOICE, CLEANING, AND CARE OF WALL COVERINGS

NOTES

CHAPTER XI

CHOICE, CARE, AND STORAGE OF HOUSEHOLD LINEN

IN every dwelling-place, whether it is a house or flat, a special place must be set apart for the storage of the household linen, which because of its initial expense is a very important and expensive part of the equipment of a house. The term 'household linen' is a wide one, and really includes articles made from wool, cotton, silk, and various other materials, as well as those made from flax.

Storage

(a) *For large quantities of linen* a small room must be set apart for the purpose.

(b) *For smaller quantities*, such as would be found in a private house or flat, a cupboard, or part of a cupboard must be used.

A good linen cupboard should conform to the following points:

- (a) It should be clean, dry, and warm.
- (b) It should be well-lighted. An automatic switch is very useful in a house served by electricity. The light is operated by the opening and the closing of the door.
- (c) The shelves should be plentiful and should be of smooth white wood. It is of little importance whether the shelves are of solid wood or are slatted. If an inch or inch and a half space is left between the shelves and the wall, air can circulate freely round the piles of linen.
- (d) The shelves should not be too deep. Eighteen to twenty inches is a very useful depth, as this easily takes a folded sheet or large damask table-cloth.
- (e) The shelves should be covered with white paper, or with sheeting hung from the back by means of tape loops or rings. This sheeting should be sufficiently long to wrap up over the linen on the shelves.
- (f) Shelves are preferable to drawers, as linen is a heavy substance and it is a strain to lift it in and out of deep drawers.
- (g) Shelves should be labelled to show their contents. Use slips of thin cardboard and fix the labels with drawing-pins to the edge of the shelf. This kind of label can easily and quickly be moved or changed according to the arrangement of the linen.

- (h) The distance between the shelves should be ten to fifteen inches to allow of piling up the linen.
- (i) A list or inventory of all linen should be kept.
- (j) The cupboard door should be perforated to allow of efficient ventilation.
- (k) The door should be provided with a lock and key.

Arrangement of Linen in the Cupboard

- (a) Each shelf should hold a definite kind of linen, e.g. bed linen, table linen, etc.
- (b) Each kind of article on the shelf should be in a separate pile, e.g. single sheets, double sheets, linen sheets, cotton sheets, etc.
- (c) Each shelf or part of a shelf should be labelled to avoid mistakes, and to make the putting away and the giving out of the linen, quick, easy, and accurate.
- (d) The top shelves can be used for storing new stock, or for storing large, heavy things which may be put away for several weeks or months at a time, e.g. blankets, eiderdowns, etc. If there is no room in the cupboard, such things may be stored in chests or in a linen hamper. They must always be put away clean, dry, and well sprinkled with moth balls or other moth preventative.

Choice of Linen

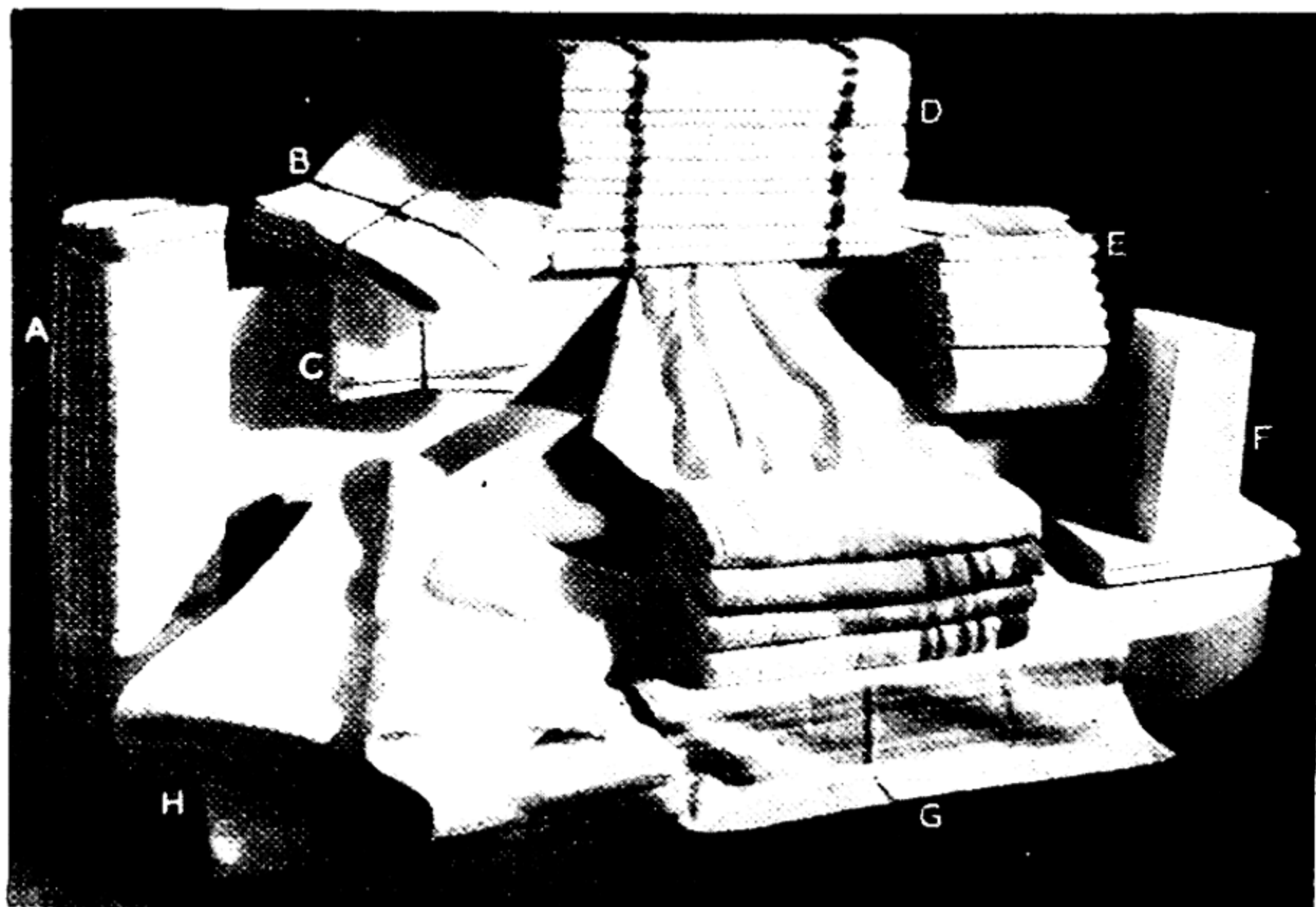
- (a) The size of the house must influence the amount of linen purchased.
- (b) The quality and quantity of linen must depend upon individual taste and means.
- (c) Avoid buying cheap linen—it is false economy.
- (d) Consider the amount of storage room.
- (e) Avoid following extremes of fashion.

SUMMARY OF LINEN FOUND IN AN AVERAGE HOUSE

A. Table Linen

- (i) *Table cloths:*
 - (a) Large white table cloths made of white or pastel-coloured damask and used for formal luncheon and dinner parties.
 - (b) *Breakfast cloths* made of coloured linen or cotton. The design may be of stripes or checks, and two or more colours may be used.

- (c) *Kitchen cloths.* These may be of bleached or unbleached coarse damask, or may be of gay-coloured cotton.
- (ii) *Table napkins:*
 - (a) *Large white damask table napkins* (27 in. by 27 in.), used for very formal meals. These are very expensive to buy and to launder and are not bought very often.
 - (b) *Small white damask table napkins* (about 20 in. or 22 in. square). These are much more usual.



PHOTOGRAPHED BY COURTESY OF JOHN LEWIS AND COMPANY LIMITED

HOUSEHOLD LINEN

A. *Glass cloths*; B. *Pillow cases*; C. *Bolster cases*; D. *Sheets*; E. *Face towels*; F. *Table napkins*; G. *Bath towels*; H. *Cellular wicker blankets*.

- (c) *Coloured breakfast table napkins.* These usually match the breakfast cloth in colour and in design. They are smaller in size than (b). Usually they are 12 in. to 15 in. square.
- (d) *Tea napkins.* Small embroidered squares of fine linen used at afternoon tea, especially when hot buttered toast, muffins, or cream cakes are served. The use of

- tea napkins is considered middle-class by some people, but they are useful for wiping sticky or buttery fingers.
- (iii) *Sideboard cloths*. These may be made of linen or damask, and the edges may be hemmed or hem-stitched. They can be bought ready-made or can be made to fit a special sideboard.
 - (iv) *Carving cloths*. These may be made of linen or damask, finished as for sideboard cloths. They are used to cover that part of a white damask cloth which is in front of the carver, and prevent any splashes from gravy or sauce, etc., from spoiling the table cloth.
 - (v) *Trolley covers*. These are similar to sideboard cloths and carving cloths, and are made to fit the tiers of a trolley. Occasionally a tray cloth will be found to be the right size for a trolley.
 - (vi) *Tray cloths*. These can be eliminated if specially surfaced trays are used. Such trays have a heat- and mark-proof surface which is very easy to keep clean, attractive to look at, and does not require covering with a tray-cloth. If tray cloths have to be used they can be bought in a very large variety of sizes, made from different materials, in different colours, and decorated in various ways.
 - (vii) *Afternoon-tea cloths*. These might also be eliminated in favour of polished tea-tables. If they must be used, they are generally made of linen, decorated with embroidery, lace, or hem-stitching.
 - (viii) *Table mats*. These are used on highly polished dining-tables, and act as a protection to the table surface. They are generally made from linen, decorated in various ways. If the mats are round in shape they are used in pairs—one under the plate and one under the glass. The oblong shape is newer and is to be preferred, as they make the table look less scrappy and untidy than when a large number of mats are used. The oblong mats are large enough to take the entire cover of each guest.

B. Bedroom Linen.

- (i) *Sheets*. These are woven with selvedge edges, the ends being either plain hemmed, finished with a row of hem-stitching, or with one or more rows of cording. The hems are uneven in width, the wider hem indicating the top of the sheet. This is useful when bed-making. Sheets are made from:
 - (a) Linen. Ideal, very smooth and cool, but expensive
 - (b) Cotton. Not so expensive as linen: a warmer surface,

but not so smooth. Can be bought with either a plain or a twill weave.

- (c) *Union*. This is a mixture of linen and cotton. The linen produces a smooth finish, and the cotton takes away the extreme coldness, which is characteristic of pure linen.

Sheets can be bought in white or pastel shades, or white with a coloured border at one end. The size of sheets varies, but the generally accepted standard sizes are: 2 yds. by 3 yds. for a single sheet, and 3 yds. by $3\frac{1}{2}$ yds. for a double sheet. Sheets are always bought by the pair.

- (ii) *Pillow cases*. These are made from the same material as sheets, and are very often bought to match. The case is closed by:

(a) Tying tapes.

(b) Buttons and button-holes. The buttons should be the special kind made of white rubber or soft white cotton.

(c) Specially arranged flap which does away with any additional fastening. This is known as the housewife type and is better than (a) or (b). Pillow cases may be decorated with embroidery or with insets of lace, but care must be taken that this decoration is **in the corners only**, otherwise the face of the sleeper will get marked with the impress of the pattern.

- (iii) *Bolster cases*. These are made from the same material and may be decorated in the same way as pillow cases. Bolster cases are often made without fastenings, the ends being decorated and allowed to hang over the mattress.

- (iv) *Blankets*. These should be made of pure wool, which produces a light fleecy warm covering. The best blankets are made in Yorkshire, and at Witney. Cheap blankets often contain a certain amount of cotton mixed with the wool, which makes a heavier blanket and one which is less warm than a pure wool one. The generally accepted standard sizes are:

(a) *Top blankets*. These are 2 yds. by 3 yds. for a single bed, and 3 yds. by $3\frac{1}{2}$ yds. for a double bed.

(b) *Under blankets*. If special under blankets are bought, they are usually the size of the mattress and have no extra 'tuck in.'

Varieties of blankets:

(a) *Top blankets*. These may be cream or pastel-coloured. The raw edges may be blanket-stitched or bound with

satin or sarsanet ribbon. This latter method is not to be advised, as the silk very quickly wears out and the edging looks shabby.

- (l) *Under blankets.* These may be specially bought, or may be an old top blanket doubled in half and used as an under blanket.
- (c) *Cot blankets.* These are of a size suitable for use in children's cots.
- (d) *Brown, grey, or red blankets* are cheaper to buy and are very useful in institutions to take the place of bedspreads. They are also used for camping purposes. They are made from inferior wool, which cannot be bleached and used for the making of top blankets. They are light and very warm.
- (c) *Camel's hair or Jaeger blankets.* These are specially made by the firm of Jaeger. They are very light and very warm, and are in the characteristic fawn shades. They are somewhat expensive.
- (f) *Cellular blankets.* These are specially woven and are very light in weight. Because of the special weave they are very warm in winter and cooler in summer.
- (g) *Merino blankets.* Made from the fleece of a special variety of sheep. The woollen fibre is very fine.
- (h) *Flannelette blankets.* Cheap and unsatisfactory. Flannelette is a cotton material made to look like flannel.
- (i) *Quillettes.* A type of blanket made with a woollen pile, which holds the air and insulates the sleeper from extremes of temperature. They are soft and light, and can be bought in all sizes.

Cleaning of blankets. This can be either:

- (a) Professional dry cleaning. The cost varies according to the size of the blanket.
- (b) Washing at home.
- (v) *Bedspreads.* These are made from a large number of different materials. They should:
 - (a) Tone with the colour scheme of the room.
 - (b) Be light in weight.
 - (c) Be washable.
 - (d) Be non-crushable.
 - (e) Be dainty in appearance.

The housewife can make very effective bedspreads by using simple chintz, cretonne, casement cloths, etc., by the yard, making the bed-cover the size and shape required.

(vi) *Eiderdown quilts*. These are light in weight and productive of much warmth. The filling may be:

(a) Down from the eider-duck and various other water fowls.

(b) Feathers. This is cheaper than down. The grades of feathers vary according to size and cost.

(c) Kapok. This is a vegetable down used in cheap eider-downs. It is most unsatisfactory and tends to form lumps in the corners of the cover.

The cover may be made from a very large number of different materials, and the present fashion is to have a plain and not a patterned material. If a smooth silky material is chosen, the wrong side of the quilt should be made of cotton, to prevent it from slipping off the sleeper.

(a) *Bath towels*. These may be made of bleached or unbleached cotton and for very rough towels linen is sometimes used. The ends should be finished with hems. They vary in size and can be obtained in white or pastel colours.

(b) *Face towels*. Made of linen or cotton or a mixture of the two. A special weave known as 'huck-a-back' is generally used. The towels can be bought bleached or unbleached. The latter are less expensive, and after being laundered a few times they very soon become white.

(c) *Guest towels*. These are very small towels similar to face towels in material, colour, and weave.

C. *Household Cloths*. These can be bought in varying sizes and qualities and made from either linen or cotton. The name is woven through the centre or along the edges of the cloths, thus preventing their misuse. The lettering can be done in different colours. The names include Glass, Tea, Pantry, Basin, Housemaid, Kitchen, Knife, Oven, etc. Plain linen tea-towelling can be bought by the yard and made up to special-sized cloths by the housewife if she so wishes. Linen tea-towelling with a coloured check can also be bought by the yard.

D. *Dusters and Dust Sheets*. Dusters vary in size, quality, and type. They are generally made of cotton, with either a smooth or a fluffy surface, the latter being useful for polishing purposes. Dust sheets made of white, unbleached, or coloured cotton vary in size and quality. Dust sheeting in white, unbleached, or coloured cotton, 72 in. wide, can be bought and made up into special-sized dust-sheets if required.

E. Roller Towels

- (i) *For bathrooms and cloak-rooms.* These can be made with a:
 - (a) Rough terry towelling surface.
 - (b) Plain woven surface. They vary in quality and can be had in white or pastel shades.
- (ii) *For kitchens.* The same towels as used in a bathroom, or strong unbleached linen ones can be bought.

F. Floor Cloths, Net Cloths, and Hearth Sheets. Floor cloths and net cloths can be bought in different qualities and sizes. Because they are cheap it is advantageous to buy by the dozen or half-dozen. Hearth-sheets are made from hessian, and can be bought ready-made, or the hessian bought by the yard and made to the size required by the housewife.

G. Bath Mats. These vary in size, colour, and quality. They are made of cotton, with a thick loop pile surface and are reversible.

H. Dressing-table Covers, Curtains, Cushion Covers, Cretonne, or Chintz Furniture Covers. These vary in different households.

Amount of Household Linen required

- (i) Sufficient linen must be allowed to have at least three sets of everything, one set in use, one at the wash, and one in the cupboard.
- (ii) If possible have special sets of bed linen and bedroom towels for use in emergencies such as illness, and also for special guests' use.
- (iii) Arrange a definite weekly supply of household cloths, and have three complete sets.
- (iv) A smaller quantity of house linen can be bought if all the laundry work is to be done at home.
- (v) It is better to have too much household linen than too little.

Care and Management of Household Linen

- (i) If possible buy only during the sale times, i.e. in January and in July. The reductions in price are often considerable.
- (ii) Never scorn shop-soiled linen. When washed it is perfectly good, and the cost is considerably reduced.
- (iii) Replenish the stock before it gets too low. This should be done at least once a year.
- (iv) Towels or cloths which are to be hung up should be provided with a generous-sized tape loop.
- (v) Buy household and kitchen cloths with the name woven through.

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- (vi) All household linen should be promptly and carefully repaired.
- (vii) All table linen should be hand-hemmed and the material should be cut by a thread, thus ensuring right-angled corners.
- (viii) All linen should be marked with:
 - (a) The owner's name.
 - (b) Year of purchase.
 - (c) Number in the set.
 - (d) Number of the particular article.

Example:

J K Meller

3 1940 6

J=the husband's Christian name.

K=the wife's Christian name.

Meller=the surname.

3=the number in set.

6=the set consists of six articles.

Marking of Linen can be done by:

- (i) Using marking ink. This requires considerable skill and patience. The directions on the bottle of marking ink must be very carefully followed.
- (ii) Using woven names. These can be bought in a variety of colours. Arrangements can be made whereby space is left for the insertion of date, etc., this being added in marking ink. The great disadvantage of this method is the ease with which the name tape can be removed.
- (iii) By embroidery. This is the most beautiful method, and great variation and ingenuity can be shown in arranging the embroidery. If time and skill do not permit of hand embroidery it is possible to have the embroidery done by machinery.

Use of Old Household Linen

Because of the heavy initial cost of household linen it is essential that it should be kept in perfect condition for as long as possible. When too old to serve its original purpose, and mending is no longer possible, it should be cut down and used for other purposes.

- a) *Old sheets.* Can be used for dust sheets, ironing sheets, the best parts used for making pillow and bolster slips or for covering skirt and sleeve boards; strips can also be torn off and used as bandages.

SUMMARY OF LINEN FOUND IN AN AVERAGE HOUSE 195

- (b) *Old pillow and bolster cases.* When becoming thin they can be used as pillow and bolster slips, the better parts can be used for dusters or polishing cloths.
- (c) *Old face towels.* If the ends are good they can be cut off and made into lavatory cloths, or used as basin cloths for drying hand basins, baths, etc.
- (d) *Old bath towels.* Some should be kept for sea-bathing, and for holiday making; some can be kept for drying or rubbing down dogs. The better parts can be cut off and used as chamber cloths.
- (e) *Old blankets.* Can be used as under blankets, as ironing blankets, for padding skirt and sleeve boards, cut up and made into stair treads, made into floor cloths.
- (f) *Old damask table cloths.* Can be made into smaller table cloths, nursery table napkins, serving cloths, sideboard cloths or trolley covers, carving cloths, etc.
- (g) *Old table napkins.* Can be used as serving cloths, and for dishing and serving foods.
- (h) *Kitchen cloths.* Can be kept until the spring cleaning when they can be used for cleaning and polishing, after which they can be burnt.

CHOICE, CARE, AND STORAGE OF HOUSEHOLD LINEN

NOTES

CHAPTER XII

CHOICE, CLEANING, AND CARE OF BEDS AND BEDDING

REGULAR sleep is essential for the health of all animals and the best and natural time for sleep is during the night. Every organ is at rest during sleep with the exception of the heart and the lungs which are working at a reduced rate. The amount of sleep required by human beings varies, children requiring much more than adults, because their bodies are working at a greater rate and they are more easily exhausted. Human beings should sleep on bedsteads allowing of free circulation of air under and around the sleeper.

BEDSTEADS

These should be made as plainly and simply as possible, to enable them to be kept clean easily.

Material

- (a) *Brass*. This is easily kept clean, and the smooth surface and hardness of the metal prevents the breeding of disease germs. The brass is usually lacquered, and care must be taken to keep this surface intact, as once it begins to wear off it is difficult to preserve the good appearance of the bedstead.
- (b) *Iron*. This is always finished with a layer of enamel, usually black, sometimes white as in hospitals and sanatoria, occasionally in pastel colours.
- (c) *Chromium and staybrite metals*. These are occasionally found in very modern houses and some hospitals. The tubular framework is germ- and dust-resisting, and its shape enables the bed to be very easily moved.
- (d) *Wood*. This is the more usual substance for the making of bedsteads. Various woods are used: such as mahogany, walnut, pine, spruce, oak, etc.

Construction

Bedsteads consist of a head-board and a foot-board held rigid by means of iron side bars, which support the wire mattress and the upholstered mattress.

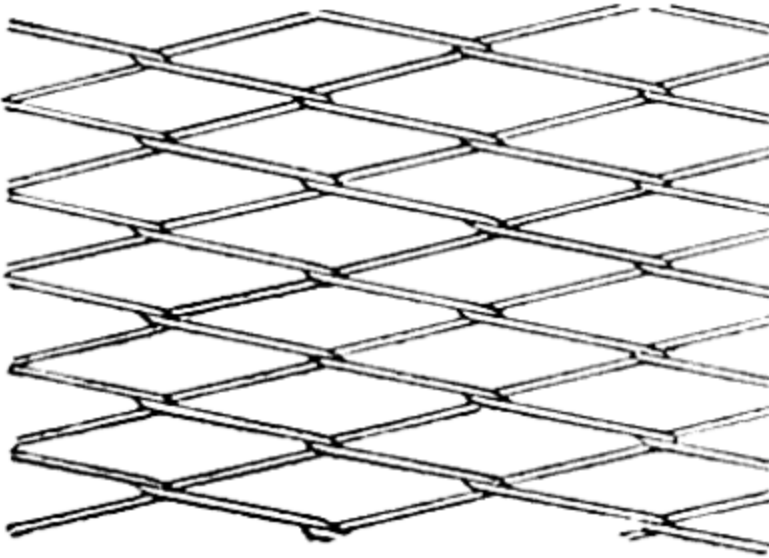
The design of modern bedsteads is altering, and the head- and foot-boards are becoming lower and smaller; in some cases the foot-board is omitted altogether. If both head- and foot-board are omitted the bed then becomes a divan-bed.

MATTRESSES

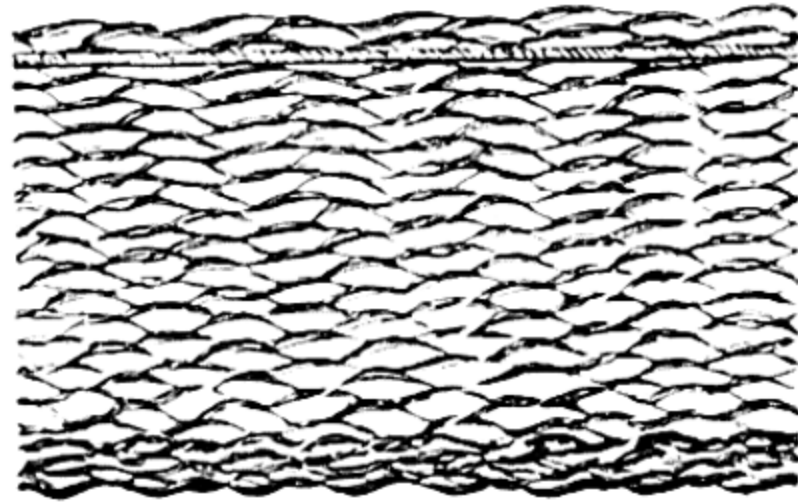
A. Wire Mattresses

These vary in arrangement.

- (a) Wire links of diamond shape, mounted in a metal frame. These links consist of short pieces of steel held in place by small hooks. This is a very rigid form of wire mattress, which will stand a large amount of hard wear and is often used in institutions.



DIAMOND LINK



WIRE MESH

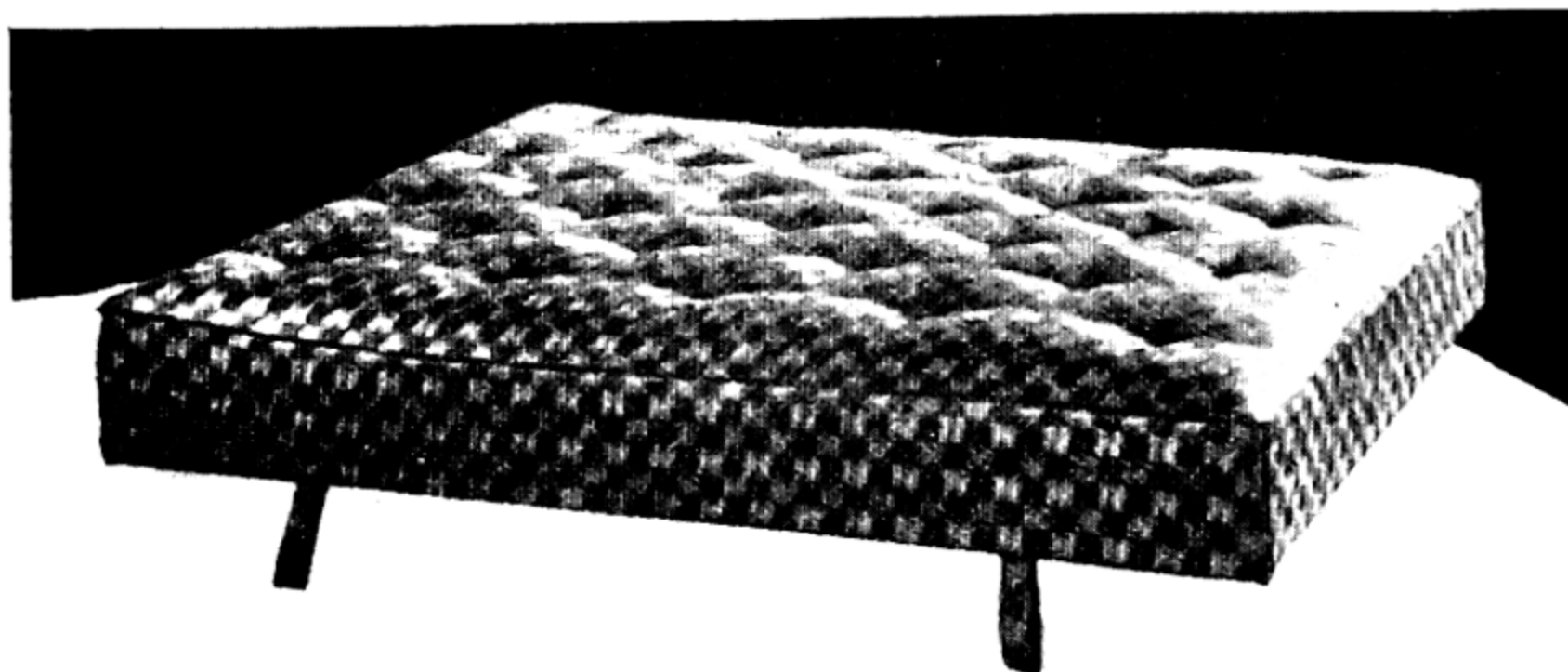
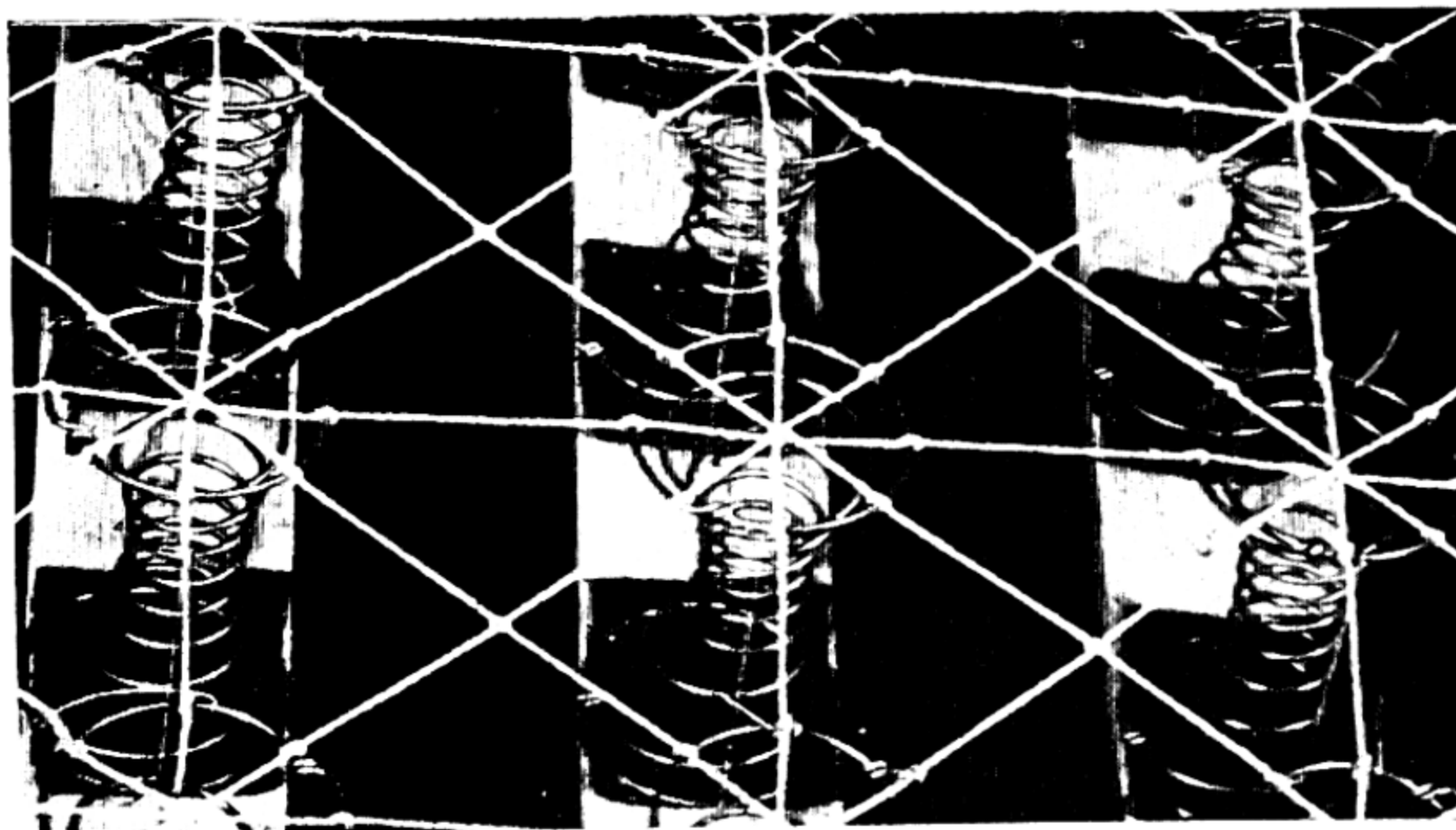
- (b) Finer steel wire in the form of coils, each line interwoven with other coils. The coiled mesh is fixed to a wooden or metal bar at head and foot ends, and each bar is fixed to a second bar by means of two large screws, which tighten the wire mesh when necessary by lessening the space between the bars. This is a less rigid type of metal mattress than (a) and is quite efficient as long as the mattress remains in good order, but usually becomes very uncomfortable as the mesh sags more and more with wear. Although the mattress can be tightened, there does come a time when the tightening ceases to be effective.
- (c) Stainless steel spiral coils fixed on metal bars, the top surface of the coils being linked together with metal links to form a flat surface for the top or upholstered mattress.

B. Upholstered Mattress or Top Mattress

The cover for this mattress is of special material called mattress ticking, which can be bought in various quantities, colours, and patterns. It is of cotton, very closely woven, to prevent the escape of the mattress stuffing.

Fillings for Upholstered Mattresses

- (a) *Horsehair*. This is very expensive, but is ideal, as it is very elastic and allows the air to penetrate the mattress freely and easily. It does not form lumps inside the cover.
- (b) *Wool*. Not such a good filling as horsehair. It is warmer, not so expensive, but may become very lumpy. It is inclined to absorb organic matter and vapours from the body, and also takes longer to air and to dry after use.
- (c) *A mixture of hair and wool* is sometimes used for stuffing mattresses, but is not always satisfactory, as the hair has a habit of binding itself round the wool, thus forming lumps. When this happens the mattress has to be re-made.
- (d) *Feathers*. These should never be used as a filling, as they are thoroughly insanitary, over-heating, and exhausting. A mattress made of feathers is very heavy for one person to shake, make, and manage properly. The surface makes it almost impossible for the sleeper to lie straight and flat, and they generally tend to curl round and adopt a very poor attitude whilst asleep. Feather mattresses require very thorough shaking to keep them in good condition and shape. They are liked by old people because they are very warm.
- (e) *Flock*. The cheapest and nastiest of all fillings. It consists of the ravellings and waste from cotton materials, etc., but it is hardly ever used nowadays. It very readily forms into lumps and frequently becomes verminous.
- (f) *Fibre*. This is a modern mattress filling and is very often used as a substitute for hair. It is light and springy, very good and very much cheaper than hair. It comes from the outer husk of the coco-nut.
- (g) *Straw chaff*. This is used for children's cot mattresses, and because of its cheapness it can very easily be thrown away when soiled and very easily renewed.
- (h) *Straw and hay*. Hardly ever used nowadays, except in emergencies and for camp mattresses.
- (i) *Rubber*. This is the most modern form of mattress filling. Sponge rubber with an outer layer of sheet rubber is used. This is very hygienic as the rubber does not absorb odours or moisture.



BOX MATTRESS

HEAL AND SON LTD

The upper picture illustrates the construction : slats of wood supporting the wire springs. A square of felt is placed under each spring.

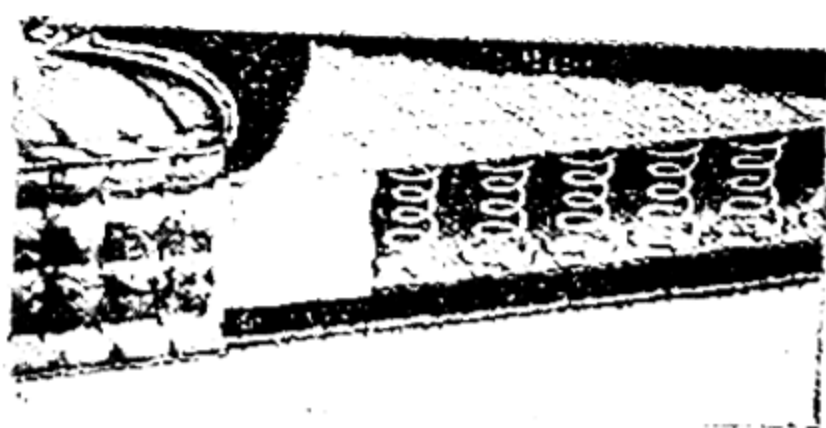
The lower illustration shows the complete mattress, with rigid sides and padded top. The loop handles are necessary to facilitate moving the mattress.

C. Box Mattress. This is a heavy and expensive type of mattress. It consists of a wooden framework containing steel spiral springs. These are padded on top with a layer of hair, or hair and wool mixed. This mattress is never turned once it is placed in position and an upholstered mattress is always required on top, thus making an extremely comfortable surface on which to lie.

D. Interior Spring Mattress. This consists of a large number of small spiral springs clipped together and padded on all surfaces with a layer of horsehair and wool. Occasionally each spring is enclosed in a flannelette cover before being clipped to its neighbour. The cotton cover prevents the springs from touching one another and creaking and squeaking. The final cover is of mattress ticking, and at each side there are loop handles made of the ticking, to facilitate the turning of the mattress. This type of mattress must never be rolled or folded over as the springs may interlock. It should occasionally be turned by two people working together and keeping the mattress quite flat whilst turning it.

MATTRESS COVERS

A. Wire Mattress. Except when made of stainless metals, the surface of wire mattresses should always be covered to prevent rust marks forming on the upholstered mattress. The cover may be made from hessian or quilted cotton material. It should be securely tied by tape to the metal framework.



STAPLES AND CO. LTD

SECTION OF INTERIOR SPRING
MATTRESS

B. Upholstered Mattress. This must always be protected and kept clean by loose covers slipped on over it. The covers

can be made of unbleached, twilled calico, or strong bleached twilled calico.

Re-making and Cleaning Mattresses

This has to be done occasionally, the frequency varying with the amount of use given to the mattress.

PILLOWS AND BOLSTERS

Pillows

A. *Outer Covering.* This is pillow ticking, similar to but of a finer variety than, the mattress ticking. The ticking must be good to prevent the stuffing from coming through. An additional preventative is the waxing and soaping of the inner side of the pillow ticking. This prevents the feathers or down from working out.

B. *Filling.* This may be:

- (a) *Down.* The fluff from the breasts of geese and ducks. This is the softest and most expensive form of filling.
- (b) *Feathers.* These are less expensive, but vary in cost according to size and quality. The smallest sized feathers, i.e. the softest, are the most expensive.
- (c) *Sponge rubber.*

Shape of Pillows

The usual shape is oblong, but French pillows, which are square in shape, can be obtained. The square pillow is supposed to give better support to the head, neck, and shoulders.

Size of Pillows

The standard size is 20 in. by 30 in. The French or square pillow is 27 in. by 27 in.

Amount of Stuffing required

For a standard pillow (20 in. by 30 in.) allow:

- $1\frac{3}{4}$ to 2 lb. of down.
- $2\frac{1}{4}$ to $2\frac{1}{2}$ lb. of feathers.

Bolsters

A. *Outer Covering.* This is made of pillow ticking.

B. *Filling.* The head and face never rest directly on the bolster, which merely acts as a support to the pillow. It is not necessary for a bolster to be filled with such soft and expensive filling as pillow down, therefore feathers of varying qualities are used for filling.

Upholstered, triangular, or wedge-shaped bolsters are sometimes made, being filled with horsehair, or a mixture of horsehair and wool or sponge rubber, and covered with mattress ticking. They are placed on the mattress and the under blanket and under sheet are carried over the bolster, which thus acts as a support to the pillow or pillows on top.

Pillow and Bolster Slips

Pillows and bolsters are kept clean by being covered with an under slip, over which is placed the pillow or bolster case. The under slip may be of bleached or unbleached cotton or of flannelette, and is taken off for washing once or twice each year, depending on the amount of usage the pillow has had. Pillow and bolster cases are replaced weekly or fortnightly by clean cases.

Storage of Pillows and Bolsters

When not in use, pillows and bolsters should be carefully stored. They must be protected from dust and dirt, and from such household pests as moths.

Cleaning of Pillows and Bolsters

The cleaning can be either:

- (a) Professional dry cleaning.
 - (b) Washing at home.
- (a) *Professional dry cleaning.* This is very satisfactory where provision for outdoor drying is limited, as in a town or in a flat. The cost varies according to the size of pillow, and according to the firm.
- (b) *Washing at home*
- (i) Unpick the ticking at one end.
 - (ii) Tack the opening of an old linen bag or an old pillow case to the opening of the pillow.
 - (iii) Shake the feathers from the pillow into the bag and tie up the bag opening.
 - (iv) Wash the feathers in warm soapy water until quite clean.
 - (v) Rinse thoroughly in clean warm water.
 - (vi) Squeeze the bag and the feathers.
 - (vii) Hang in the open air to dry, shaking the bag occasionally.
 - (viii) Wash the ticking and rub the inner side with soap or beeswax to prevent the feathers from coming out.
 - (ix) Replace the dried feathers and sew up the end of the pillow.



NOTES

CHAPTER XIII

DAILY CLEANING OF A HOUSE

(ONE of the most important parts of a housewife's work is the arranging for the adequate cleaning of all parts of the house. The planning of this work entails much thought and an extensive knowledge of the practical work involved.)

An eight-hour working day is the generally accepted factory limit, but no one has been able to legislate for the length of a housewife's working day, and she is constantly expected to work for longer hours in a profession which knows no half-days, national holidays, or slack seasons.

This is one of the deplorable aspects of household management, but much can be done to increase leisure by the careful planning and arrangement of all the work, particularly that known as housework.

(General Routine of a House

The routine of the house should be such that the daily work should always be finished before starting the weekly work or the special work of the day. When arranging the daily work the following should be the general order:

- (i) All living-rooms, starting with the dining-room or breakfast-room, which should be clean, warm, and tidy before the serving of breakfast.
- (ii) Bedrooms.
- (iii) Bathroom and lavatory.
- (iv) Landings, stairs, cloak-room, and hall.
- (v) Kitchen and back premises.

NOTE. *Front hall.* The time allotted to the daily cleaning of front halls varies according to the habits of the household. In a professional man's house, e.g. a doctor or a dentist, the front hall should be daily cleaned before breakfast, so that all cleaning equipment can be put away before the arrival of patients or clients.

In a textbook the *general principles* only of daily cleaning can be considered, as every house presents its own individual problems, and every room differs in some respects from every other room of the same type. These general principles are guiding factors, and must be adapted when circumstances require.

The **Aim and Object of Daily Cleaning** is to obtain the most perfect result with the expenditure of a reasonable amount of time and labour.

Reasons for Daily Cleaning

- (i) It is easier to keep things clean ~~than to clean dirty things~~.
- (ii) To clean surfaces and materials which have been allowed to become very dirty requires the expenditure of more labour, time, and cleaning material, and this tends to wear out the surfaces.

Time allotted to the Daily Cleaning

As early in the morning as possible:

- (i) So that people can live in clean and tidy rooms.
- (ii) The process is not beautiful, and should therefore be got through quickly.
- (iii) During the night the dust floating about in the air has settled and is therefore easier to remove before it gets stirred up again.)

Airing the House

This is important and should be done first thing in the morning. The stagnant air of the house shut in all night is replaced with fresh air, and the air in town especially is freshest in the mornings, before domestic fires are alight and before commercial stoking has taken place. A modification of this must take place under certain circumstances—a gale of wind or driving rain, intense cold, all make it difficult to air the house thoroughly.

{ The Daily Work of a House consists of

- (i) The removal of all surface dust.
- (ii) The keeping clean and bright of all polished surfaces, i.e. polished wood floors, furniture, windows, mirrors, etc.
- (iii) The general tidying-up of all the rooms in daily use.

The Arrangement of the Daily Work

- (i) Collect all apparatus and equipment.
- (ii) Remove all dust and waste water:
 - (a) Clean the fire-place and re-lay the fire.
 - (b) Clean the washstand or fitted hand-basin.
 - (c) Sweep the floor.
 - (d) Dust all ledges as high as the upstretched arm can reach, and dust all furniture and ornaments.

NOTE. Beds should be made before starting to sweep the floor.

- (iii) Rub up all bright surfaces, the polished floor last of all.
- (iv) Give the room a general tidying.
- (v) If the cleaning equipment is not to be used for other rooms it can then be put tidily away✓

SPECIAL NOTES ON DAILY CLEANING

A. Cleaning a Fire-place

- (i) Collect all the necessary equipment in a housemaid's box, which should contain a hessian hearth sheet or newspaper, housemaid's gloves, sticks, black-lead and black-leading brushes, hearth brush, shovel, matches.
 - (ii) Roll up the hearth-rug and put on one side, or put into the passage outside the room.
 - (iii) Cover the carpet or the floor with the hearth-sheet or with sheets of newspaper.
 - (iv) Move the fender and fire-irons to one side.
 - (v) Rake out the dead fire, and separate the ash from the cinders, either by gentle raking or by using a cinder sifter.
 - (vi) Rub up any black-leaded parts.
 - (vii) Lay the fire with:
 - (a) Lightly crushed newspaper.
 - (b) Dry sticks, laid cross-wise and in pyramid form.
 - (c) Fire lighters, three to four in number, each made by tightly rolling up a sheet of newspaper and twisting it into a ring.
 - (d) The largest cinders at the back.
 - (e) Small pieces of coal in front and on top. The coal should be built up in pyramid form.
 - (f) Brush the hearth free from ash.
 - (g) Wash the tiles with soapy water, using a floor cloth.
- NOTE. This may only be necessary two or three times a week, depending on the type of fuel burnt.
- (h) Replace the fender and fire-irons.

B. Fitted Hand-basin

- (i) Collect the correct equipment:
 - (a) Glass cloth. This should be a smooth linen cloth.
 - (b) Basin cloth. This is usually a cotton cloth.
 - (c) Net cloth.
 - (d) Cleaning powder, or cleaning paste.
 - (e) Two dry dusters.

- (ii) Half fill the basin with warm water. Wash the tooth glass, using the clean net cloth or the fingers. Rinse and dry with the glass cloth.
- (iii) Dust the contents and remove from the glass shelf. Clean the shelf.
- (iv) Replace the shelf and its contents.
- (v) Clean the tiles or plate glass surround to the basin.
- (vi) Clean the basin, including the soap wells. Use the net cloth and a little cleaning powder or cleaning paste. Rinse thoroughly and dry with the basin cloth.
- (vii) Rub up the chromium or staybrite metal taps, using the dry dusters.

C. Washstand

- (i) Collect the correct equipment:
 - (a) Glass cloth.
 - (b) Basin cloth.
 - (c) Net cloth.
 - (d) Housemaid's cloth or chamber cloth. This is generally made of terry towelling and often of some distinctive colour.
 - (e) Cleaning powder, or cleaning paste.
 - (f) Housemaid's bucket or slop-pail. This is a white enamel bucket.
 - (g) Can of hot water.
- (ii) Empty the contents of the chamber into the housemaid's bucket.
- (iii) Empty the contents of the hand-basin into the chamber, and then into the housemaid's bucket.
- (iv) Half fill both hand-basin and chamber with hot water.
- (v) Rinse the tumbler and soap-dish in the hand-basin and dry.
- (vi) Wash hand-basin, rinse, empty, and dry.
- (vii) Wipe the top and back of the washstand with the net cloth.
- (viii) Empty chamber and dry.
- (ix) Replace all the contents of the washstand.
- (x) Refill the jug and glass water-bottle.

NOTE. The waste water from a bedroom should be emptied down the lavatory, slop sink, or housemaid's sink, which should then be well flushed. The housemaid's bucket should be well rinsed and dried and after each day's use the housemaid's cloths should be well rinsed out, and hung to dry, preferably in the open air.

D. Bath

- (i) Collect the correct equipment:
 - (a) Net cloth.
 - (b) Basin cloth.
 - (c) Cleaning powder, or cleaning paste.
 - (d) Two dry dusters.
- (ii) Run a little hot water into the bath.
- (iii) Clean the whole of the inside surface, using the damp net cloth and a little cleaning powder. Pay special attention to the surface just below the taps.
- (iv) Rinse very thoroughly. This is most important.
- (v) Dry with the basin cloth.
- (vi) Rub up the taps, using the dry dusters.

E. Lavatory

- (i) Flush.
- (ii) If necessary brush the inside of the pan with the lavatory brush.
- (iii) Flush again, rinsing the brush in the pan and shaking thoroughly. Hang the brush to dry in the open air.
- (iv) Dry the outside of the pan and the lavatory seat with the housemaid's chamber cloth. The lavatory towel must not be used for this purpose.

F. Bed-making

The housework should be so planned that beds are made by two people. Experiment has shown that in this process a pair of workers is more than twice as efficient as one.

If the maximum skill is to be obtained with the minimum effort, the work of bed-making must be rhythmical, the movements smooth, and as far as possible circular. The hands should be perfectly clean, and should be used simultaneously. The average adult spends eight to ten hours in bed nightly. Cooling and airing of the bed are therefore essential.

The corners of bedclothes can be tucked underneath the mattress in two ways, producing either:

- (a) A mitred corner.
- (b) A box corner.

Experiment has shown that a box corner can be made with fewer movements than a mitred corner. It is suggested that for ordinary bed-making purposes a box corner should always be made. When placing the blankets in position, additional speed and accuracy can be achieved if the centre of each hem is marked with contrasting coloured wool.

G. Flowers and Plants

Attention to flowers and plants is very often left until the afternoon, when the housewife attends to all the plants and flowers in the house.

H. Daily Attention to a Bedroom

This is done at three different times during the day.

1. *Before breakfast.* This is usually done by the occupant of the room, and consists of:

- (i) Opening the bedclothes to cool the bed.
- (ii) Putting away bedroom slippers, hanging up dressing-gown, and emptying the hot-water bottle.
- (iii) Tidying the dressing-table.
- (iv) Opening the window.

2. *After breakfast.* The daily cleaning follows the usual routine.

3. *In the evening.* The time allotted to this part of the work varies according to the time of the year, the amount of labour available, and the habits of the family. The work consists of:

- (i) Pulling down the blinds and closing the curtains.
- (ii) Taking off and carefully folding up the bedspread.
- (iii) Turning down the bed-clothes.
- (iv) Placing pyjamas or nightdress and dressing-gown neatly on the bed, and the bedroom slippers on the floor near by.
- (v) A hot-water bottle may be placed in the bed, and the night-clothes may or may not be wrapped round the bottle.

NOTE. The contents of all bedroom waste-paper baskets must always be burnt.

J. Daily Cleaning a Living-room

This is made very much easier if the room is tidied the previous evening. Books, newspapers, needlework, knitting, etc., should be put away tidily, the cushions puffed up and left in their proper places, and loose covers straightened. The living-rooms should always be daily cleaned as early in the day as is possible. Ash-trays should be emptied frequently, and always before the room is left at night. They will probably require washing each day to remove marks.

K. Landing and Stairs

These should be cleaned after all the rooms of the house have been daily cleaned and all the doors leading to the landing and stairs must be kept shut. Work from above downwards.

L. Front Hall

The time allotted to the daily cleaning of a hall varies according to circumstances. See previous note, p. 207. If the floor is of stone or tiles it will probably require daily washing. This should be done after the daily cleaning to obviate the necessity for walking over wet surfaces.

M. Kitchen

The daily cleaning is done at three different times during the day.

1. *Before breakfast:*

- (i) Remove the fender and fire-irons.
- (ii) Roll up the hearth-rug and put on one side.
- (iii) Daily clean the range. See page 58.
- (iv) Lay and light the fire.
- (v) Replace the fender.

2. *After breakfast:*

- (i) Attend to the range.
- (ii) Daily clean the sink. See page 245.
- (iii) Sweep the floor.
- (iv) Dust the room thoroughly.

3. *After the midday meal:*

- (i) Make up the fire.
- (ii) Scrub the hearth and replace the fender.
- (iii) Put down the hearth-rug.

NOTE. If a gas-stove is used, it is daily cleaned after lunch.

N. Bathroom

Towels and bath mat must be put to dry if necessary. This can be done out of doors or in the hot cupboard.

Daily cleaning with an Electric Cleaner

The ordinary order of work is followed, the cleaner being used instead of dusters and brushes. The work takes a little longer but is very much more thorough, as all the loose dust is collected in the dust bag, from which it can be emptied on to a piece of newspaper, rolled up tightly and burnt.

DAILY CLEANING OF A HOUSE

NOTES

CHAPTER XIV

WEEKLY OR PERIODICAL CLEANING OF A HOUSE

THE thorough cleaning of all parts of a house is impossible every day, therefore a more complete cleaning is given to all parts of the house at stated intervals, and this cleaning is known as the Weekly or Periodic Cleaning. In the past this more thorough cleaning was automatically given each week to every room, but nowadays whether the thorough cleaning of a room is given each week or not depends on:

- (a) The amount of labour available.
- (b) The size of the house.
- (c) The number of people in the house.
- (d) The situation of the house, whether in the country or the town.

The Aim and Object of Periodic Cleaning is the same as in daily cleaning, i.e. the removal of the largest possible amount of dust and dirt in a reasonable amount of time and with the expenditure of a reasonable amount of labour.

As the amount of dust and dirt to be removed is greater, special arrangements must be made:

- (a) To allow of the easier removal of the dust.
- (b) Greater precautions must be taken to prevent the dust from settling, and spoiling the remainder of the furniture and furnishings.

ORDER OF WORK

1. Collect the Necessary Equipment and Apparatus.

2. Preparation for the Work.

(a) *The worker.* She should wear an overall and cap, and for certain parts of her work she should wear housemaid's gloves.

(b) *The room.*

(i) The bed. The bedstead should be thoroughly dusted and the blankets and eiderdown quilt shaken out of doors. The bed should then be re-made except for

the bedspread, which should be left folded across the foot of the bed. Small ornaments, pictures, photographs can then be dusted, placed on the bed, and the whole covered with a dust sheet.

- (ii) Small furniture should be dusted and placed outside the room. Care should be taken not to completely block up the passage or landing.
- (iii) Ornaments should be collected together, dusted, and placed in an arm-chair or sofa, or on a table, and covered with a dust sheet.
- (iv) Large furniture should be dusted and covered with dust sheets.
- (v) Curtains. If small they should be carefully taken down and placed in an adjoining room in such a way that the material is not crushed. Large curtains should be turned up and pinned in position, to keep them well off the floor.

3. Removal of Dust and Dirt

A. Dust

- (a) *The fire-place.* In addition to the ordinary daily cleaning any ironwork should be thoroughly black-leaded.
- (b) *Fitted hand-basin.* In addition to the ordinary daily cleaning the taps may require polishing after cleaning, according to the metal. Cover the basin with a dust sheet.
- (c) *A washstand.* In addition to the ordinary daily cleaning, all the china should be thoroughly washed. This may be done in the bedroom, in a large bowl or bath placed on a dust sheet on the floor, or it may all be washed in the bathroom. The stand should be dusted, cleaned, and polished according to its surface, after which the china can be reassembled, the jugs filled with water, and the whole covered with a dust sheet.
- (d) *Sweeping:*
 - (i) The walls, beginning from the top and working downwards.
 - (ii) The floor, according to the substance and covering.
- (e) *Dusting.* All ledges, doors and door-frames, windows and window-frames, etc.

B. Dirt

- (a) *Windows.* The inside of windows should be cleaned during the periodical cleaning of the room.
- (b) *Mirrors.* See page 150

- (c) *Paint work.* It is quite impossible and most undesirable that all the paint work should be washed each week. Such places as the mantelpiece, the window-sill, round the door-handle, etc., should be washed as often as they require it.

4. Polishing

- (a) *Small pieces of furniture.*
 (b) *Large pieces of furniture.* It is impossible to polish all the furniture in each room during the weekly cleaning. A good plan is to polish all the small pieces and one large piece weekly, taking the large pieces in rotation. If time does not permit of all the small pieces being polished weekly, then they also may have to be polished in rotation.

5. Tidying and Finishing

- (a) *All dust sheets* should be removed.
 (b) *Small furniture* replaced.
 (c) *Small curtains* replaced, or large ones unpinned.
 (d) *Ornaments* replaced.
 (e) *Cushions, plants, and flowers* attended to.

6. All Equipment and Apparatus put away

SPECIAL NOTES ON PERIODIC CLEANING

A. **Dust Sheets.** After use these should be carefully taken off the furniture, the dusty surface being kept inside. They can then be taken outside and thoroughly shaken, folded up, and put away.

B. **Clocks.** These should be moved as little as possible otherwise the action may be affected. Large clocks, such as grandfather clocks, should be dusted and covered with a dust sheet; smaller clocks can be dusted and covered with a duster.

C. **Plants and Flowers.** All the plants and flowers of the house should be attended to at the same time, usually in the early afternoon.

D. **Books.** When weekly cleaning a room discretion must be exercised as to the amount of attention the books must receive. Large numbers kept in glass-fronted book-cases need not be touched, the book-case being dusted and covered with a dust sheet. Large numbers kept in open shelves will have to be dusted whilst remaining on the shelves—the book-case dusted, and the whole covered up with a dust sheet. Smaller numbers of books can be taken off the shelves and brushed or dusted individually, the shelves dusted, the books replaced, and the whole covered up with a dust sheet.

E. Lavatory

- (i) As in daily cleaning. See p. 211.
- (ii) Pour hot, strong soda water into the pan (allow 2 oz. to 1 quart water). Brush round vigorously: flush with clean water.
- (iii) Polish the lavatory seat with a little furniture cream.
- (iv) Wash, dry, and if necessary polish the floor.

ORDER OF WORK WHEN USING AN ELECTRIC CLEANER

If a vacuum cleaner is available the order of work is slightly changed. It is not necessary to dust sheet any furniture or ornaments, nor is it necessary for the worker to protect herself from the dust, which is collected by suction and not by dusting and brushing.

1. Collect the Necessary Equipment and Apparatus

2. Preparation for the Work

- (a) *The worker.* If a coal fire has to be attended to, housemaid's gloves can be worn; also an overall. A cap is not necessary.
- (b) *The room.*
 - (i) The bed should be dusted, using a suitable attachment to the cleaner, and remade.
 - (ii) Small furniture can be dusted and placed outside, or grouped together in one part of the room. The floor should be left as clear as possible to enable the cleaner to be used easily.

3. Removal of Dust and Dirt

A. Dust

- (a) *The fire-place.*
 - (b) *Fitted hand-basin or washstand.*
 - (c) *Sweeping:*
 - (i) The walls.
 - (ii) The floor.
 - (iii) The furniture.
 - (iv) All ledges, pictures, etc.
 - (v) For inaccessible parts use the blowing attachment.
- The dust will then settle at a lower level, from which it can be collected.

} See page 209.

} Care must be taken to use the correct type of nozzle or attachment.

B. Dirt

- (a) *Windows.*
- (b) *Mirrors.*
- (c) *Paint work.*

4. Polishing.

- (a) *Small pieces of furniture*, in rotation.
- (b) *Large pieces of furniture*, in rotation.
- (c) *Metals*.
- (d) *Floor*. Use an electric polisher if possible.

5. Tidying and Finishing

- (a) *Small pieces of furniture* replaced.
- (b) *Cushions, plants, and flowers* attended to.

6. All Equipment and Apparatus put away

NOTES

CHAPTER XV

SPRING OR SEASONAL CLEANING OF A HOUSE

THE arrival of the light spring days with their brightness and sunshine cause a house and its contents to look shabby and dirty in a way which is not obvious during the dark days of winter. Therefore it becomes apparent to the housewife that the house is in need of:

- (a) A very complete and thorough cleaning.
- (b) Decorating.

NOTE. The same type of thorough cleaning is often given to a house in the autumn, when the winter curtains, etc., are put up.

Spring Cleaning

The spring cleaning should be finished before the hot weather begins and should not be started too early or it will be too cold to do without fires. Also, weather conditions will not permit furniture, hangings, carpets, etc., to be put into the garden for airing and cleaning.

Points to remember when organizing a Spring Clean

- (i) Make a complete and careful plan of the work to be done each week, remembering:
 - (a) Not to attempt too much work in one day.
 - (b) Not to upset the daily work more than is necessary.
 - (c) To arrange the actual spring cleaning to be done on alternate days, thus leaving a day's rest in between.
- (ii) Meals must always be regular, suitable, and substantial.
- (iii) Choose a time when the house is not full of people, i.e. avoid the week-ends and wait until the children have returned to school.

Preparation for Spring Cleaning

- (i) Early in the spring decide on any necessary decorations, alterations, and repairs. Obtain estimates for the work, decide which to accept, and arrange for the workmen to come in to do the work.
- (ii) Arrange for the sweep to clean the chimneys.
- (iii) Engage any extra labour which may be required.

- (iv) See that there is a good supply of cleaning stores and food stores in the house.
- (v) See that all equipment, such as brooms, brushes, electric vacuum-cleaners are in good condition. Have an adequate supply of mops, dusters, etc.
- (vi) All cupboards, drawers, chests, wardrobes, etc., should be turned out. The woodwork should be thoroughly cleaned and dried, and the contents sorted. Nothing should be kept except that which is really required. Other things should be sent to jumble sales, given away, sold, or burnt. Avoid unnecessary hoarding. Reline all drawers and cupboards with clean paper, and replace the contents tidily.
- (vii) All bottles, jars, tins, etc., in store cupboards should be emptied, washed, dried, labelled, and the contents returned.
- (viii) Winter clothes should be cleaned, folded carefully, and put away for the summer months. Protection against moth is necessary.
- (ix) Curtains, extra blankets, eiderdowns, etc., should be dry-cleaned or washed and put away. Protection against moth is necessary.

Special Work done during the Spring Cleaning

- (i) All pictures should be cleaned.
- (ii) All ornaments should be washed or cleaned.
- (iii) All walls should be cleaned.
- (iv) All paint work washed and, if necessary, polished.
- (v) All furniture washed and polished.
- (vi) All carpets should be taken up and thoroughly cleaned.

This may be done: (a) at home, or (b) professionally.

NOTE. The spring-cleaning of carpets should be regulated by the amount of wear to which they are subjected.

- (vii) All bedsteads should be thoroughly cleaned.
- (viii) All winter clothing put away.

Order of Work in a House

- (i) Begin at the top of the house and work downwards, doing the least-used rooms first.
- (ii) After all the rooms are finished, the landings, passages, halls, and staircase should be cleaned.
- (iii) The kitchen and back premises are cleaned last of all.
- (iv) Always finish one room before beginning the next.

SPRING OR SEASONAL CLEANING OF A HOUSE

NOTES

CHAPTER XVI

CARE OF INVALIDS' ROOMS (FOR INFECTIOUS AND NON-INFECTIOUS CASES)—PREPARATION OF ROOMS FOR CHIMNEY SWEEPING—SHUTTING UP A HOUSE FOR A HOLIDAY—OPENING A HOUSE AFTER A HOLIDAY

CLEANING AND CARE OF A SICK-ROOM

THE room in which a sick person is being nursed should be kept scrupulously clean, and the fewer its contents the more easily can it be kept clean. If the patient is infectious then even greater precautions have to be taken during the cleaning of the room.

Points to Observe

- (i) All apparatus and utensils used in the cleaning of an infectious patient's room should be kept for that purpose only, and not used for the cleaning of other rooms. In the average house this requires very careful organization. This is an occasion when use may be made of the cheap cleaning equipment which can be bought at one of the many chain stores. At the end of the illness the equipment can be burnt.
- (ii) The apparatus and equipment used in the cleaning of non-infectious patients' rooms need not be kept separate.
- (iii) The door of an infectious patient's room should be opened as seldom as possible, thus avoiding currents of air which may spread infection.
- (iv) The cap and overall used by the worker in an infectious patient's room should not be taken outside, but should be kept in the room, put on immediately on entering, and taken off before leaving the room.
- (v) During the actual cleaning process the main points to consider are:
 - (a) To work as quickly and quietly as possible.
 - (b) To work in such a way that the minimum of dust is raised, because if dust is raised and scattered it becomes particularly difficult to collect and dispose of it.
- (vi) Dusting should be done by means of damp dusters, which may be either the ordinary cotton type or chamois leather. They should be wrung out in plain cold water, or cold water

- and a disinfectant such as Milton, Jeyes' Fluid, Dettol, etc. For proportions follow the instructions given on the bottle.
- (vii) All the dust from the floor, etc., of an infectious patient's room should be gathered together and burnt in the fire in the room. If there is no coal fire in the room, wrap up the dust in newspaper and burn it at once in the nearest fire, or put it into a bucket and cover with disinfectant and water. Burn the packet when convenient.
 - (viii) Washing the floor of a patient's room should be avoided as the surface may remain damp for some considerable time. It should be wiped over with a damp floor cloth.

PREPARATION FOR A VISIT FROM THE SWEEP

- (i) About ten days' notice should be given to the sweep. This is essential during the sweep's busy season, i.e. during the spring weeks.
- (ii) State exactly the number of chimneys to be cleaned and the day and time on which the work is to be done.
- (iii) Make inquiries as to the cost. This varies:
 - (a) According to the type of chimney to be swept. A kitchen-range is more expensive than a bedroom chimney.
 - (b) According to the district.
 - (c) According to the amount of work to be done.
 - (d) Position of the house. If in the country, payment must be made for the time occupied by the sweep on the journey.
- (iv) The room must be carefully prepared and everything covered up with dust sheets or sheets of newspaper.
- (v) Curtains should be taken down.
- (vi) The hearth-rug should be rolled up and taken outside; the carpet in front of the fire-place should be turned back if possible, and the floor from doorway to fire-place covered with newspaper.
- (vii) The floor space immediately round the fire should be well covered with newspaper, to allow the sweep space on which to rest his tools.
- (viii) If possible the chimney sweeping should be followed by either the weekly cleaning or the spring cleaning of the room.
- (ix) The window and door should be kept shut, to minimize the draughts of air.

The electric suction method of cleaning chimneys is now widely used. A dust- and soot-proof sheet is fixed by means of adhesive tape

across the entire chimney opening. In the centre of this sheet is an opening through which the brush and handles can be inserted and thus the chimney can be swept behind this special screen, and the loosened soot extracted by means of high-powered suction machines. By this method no soot should escape into the room. It is a more expensive method of chimney sweeping than the ordinary method, and can only be used where electricity is available.

SHUTTING UP OF A HOUSE FOR A HOLIDAY

The amount of work entailed by the shutting up of a house varies according to the length of time the house is to be left empty. In this case it is presumed that the house is being shut up for a family holiday, which may vary from three to six weeks.

Preparation

- (i) Careful plans must be made some time beforehand so that:
 - (a) Nothing is forgotten.
 - (b) The occupants of the house are not subjected to undue discomfort.
 - (c) The minimum amount of food is ordered.
- (ii) Tradespeople must be advised, so that orders will not be called for, and goods will not be left.
- (iii) The newsagent must be advised and the daily delivery of newspapers stopped.
- (iv) The post-master must be advised and arrangements made with regard to the correspondence. This can be:
 - (a) Forwarded to one address.
 - (b) Retained at the G.P.O. until a given date, when it will be delivered.
- (v) The police should be advised, and the chief constable asked to arrange for extra attention to be given to the house by the policeman on the beat.
- (vi) All bills should be paid before leaving for a holiday. The leaving behind of unpaid bills, particularly those belonging to small tradespeople, very often causes serious difficulties and distress to those who have supplied the goods or the work.
- (vii) The telephone exchange may be advised about the shutting up of the house, or the telephone may be disconnected.
- (viii) Suitable arrangements must be made for all pets.

The House

- (i) All rooms should be left as clean and tidy as possible. A great deal can be done beforehand in the way of clearing and cleaning, so that the minimum amount of house work has to be done during the week of departure.
- (ii) Valuables should be:
 - (a) Stored at a bank.
 - (b) Left in the care of a friend or neighbour.
 - (c) Locked up in some suitable drawer or cupboard.
- (iii) Cushions should be placed together on a sofa or easy-chair and covered with a dust sheet.
- (iv) All upholstered furniture should be covered with a dust sheet.
- (v) All blankets and eiderdown quilts should be folded neatly and left on the mattresses. They can be covered with a dust sheet.
- (vi) The small ornaments, photographs, etc., in each room should be collected on a table or chair and covered with newspaper or a dust sheet.
- (vii) Windows should be shut and bolted.
- (viii) Blinds may be lowered and curtains drawn. Many housewives think that this action advertises the fact that the house is empty and thereby invites thieves. On the other hand, if fabrics such as carpets, wall-papers, wooden furniture, etc., are exposed to the ceaseless action of sun and light for three to six weeks considerable damage may be caused.
- (ix) All soiled bed-clothes should be sent to the laundry.

The Larder

- (i) No perishable goods must be left in the larder.
- (ii) Dry goods and certain groceries may be left.
- (iii) The shelves and floors must be brushed down and scrubbed if time permits.

Final Arrangements

- (i) Gas, water, and electricity should all be turned off at the mains.
- (ii) Room doors should be locked and the keys left in the locks.
- (iii) All out-houses should be locked.
- (iv) All gates should be padlocked.
- (v) The house keys can be left with a neighbour or a friend.

OPENING A HOUSE AFTER A HOLIDAY

- (i) Arrange for food to be delivered at the house, or left with a friend or neighbour.
- (ii) Ventilate the house thoroughly.
- (iii) Turn on water and gas or electricity at the main.
- (iv) Flush all lavatories, and run the water from all taps, thereby removing all water which has been standing in tanks and cisterns during the holidays.

NOTES

CHAPTER XVII

LAYING OF MEALS—WAITING AT TABLE

LAYING OF MEALS

MEALS have to be laid three or four times daily, therefore it is essential that correct methods should be known and followed so that a table may be laid quickly, neatly, and correctly.

An attractive-looking table does much towards making simple food look appetizing, promoting good feeling amongst the diners, and making the digestion of the food more thorough because of the flow of digestive juices caused by the pleasing appearance of the table.

Before beginning to lay a meal the following points should be ascertained:

- (i) The time of the meal.
- (ii) The number of people expected.
- (iii) The number and kind of courses.
- (iv) The style of service, whether formal or informal, and whether the carving is to be done on the dining-table or on a side- or carving-table.

The following are essential for all types of meals in all houses, and on all occasions:

- (i) A clean tidy room, which should be well lighted, warmed, and ventilated.
- (ii) Spotlessly clean cutlery, glass, and silver.
- (iii) Clean table linen.

Preparation for Table Laying

NOTE. The use of a trolley is helpful and labour-saving. A heavily laden trolley can be moved quite easily.

1. Cruets. These should be refilled every second or third day.

(a) *Salts.* Prepared salt is drier than kitchen salt and therefore pours more easily. Salt should never be left overnight in silver salt cellars unless they have glass inner linings.

(b) *Pepper pots.* The holes must be kept clear. For filling pepper pots a small paper funnel is helpful.

(c) *Mustard.* The dry mustard can be mixed with water, milk, or vinegar. The consistency should be such that the mustard drops easily from the spoon.

2. Jam and Marmalade Dishes. These should be emptied, cleaned, and refilled daily.

3. Table Linen. Different meals and different forms of service require different types of table linen.

- (a) *Large damask table cloths.* These may be white or pastel-coloured and are used for formal dinner parties and luncheon parties. If used for breakfast they are always white.
- (b) *Silence cloth.* This must always be used under a damask table cloth to protect the polished surface of the table from heat and splashes of wine, gravy, etc. It also deadens the noise caused by plates, dishes, etc., being put down. It is usually made of white felt, which can be bought in varying widths according to the size of the table.
- (c) *Carving cloth.* This is placed over the damask table cloth, in front of the carver, to protect the cloth from splashes. It is taken up after the joint has been removed. It is made from damask or white linen.
- (d) *Breakfast cloths.* These are smaller than the formal damask cloths, and are often made of gaily coloured striped or checked linen.
- (e) *Table napkins.* These are usually made of damask and vary in size. Large ones are used for very formal dinners or luncheons, smaller ones for general use. Table napkins to match the breakfast cloth are sometimes used and these are smaller still in size. For formal meals table napkins may be folded in a variety of ways and placed in the centre of the cover, with the bread or roll placed inside. The small modern table napkin allows only of very simple folds: the ornate and complicated folds are possible only with the large table napkin, e.g. one which is 30 or 36 inches square. For informal meals they may be folded flat and placed in the centre of the cover or across the centre of the side plate. (See definition of cover, page 234.) When used more than once they are kept in a table-napkin ring and placed across the centre of the side plate or on the right-hand side of the cover.
- (f) *Table mats.* These are used on highly polished tables or tables which are made from beautifully grained or coloured wood. They may be used for formal or informal luncheons and dinners and are made from a large variety of materials, in varying shapes and colours and decorated in many different ways. The table surface must be protected by cork, glass, or rubber mats placed underneath the decorative ones.
- (g) *Sideboard cloths.* These are necessary if dishes are to be served from the side. A silence cloth should be used to deaden the sound of service and to protect the highly polished surface of the sideboard.

- (h) *Trolley cloths*. If a trolley is used the tiers may or may not be covered, according to the taste of the housewife.
- (i) *Tea cloths*. These are used to protect the surface of the tea-table from being scratched or spoilt by the tea-tray. They are not necessary and their elimination saves time, labour, and money.
- (j) *Tray cloths*. These can also be eliminated if specially surfaced trays are used.
- (k) *Tea napkins*. These are considered *bourgeois* but are acceptable if very generously-buttered toast, or muffins, or cakes well filled with cream are being served. Tea napkins are small, about eight inches square, and are made in a large variety of materials, in many colours and with various types of decoration.

Table Decorations

These vary enormously in arrangement, but they should always be kept low, so that diners can see over them and be able to talk across the table easily. Avoid strongly-smelling flowers. The simpler the decoration the more pleasing it is. Hot-house, garden, or wild flowers, berries, leaves, fruit, and various mixtures of these may all be used to make attractive table decorations.

Menu Cards

These vary in size and colour and can be decorated in various ways according to the season of the year or the occasion. For general use, however, the plainest kind of card with simple lettering is the best style. The dishes may be written in either French or English, but not a mixture of the two languages. The cards should be placed where they can easily be read; for a large party allow one card between two guests, for a small party one to each side of the table will be sufficient.

Place Cards

Used only for large luncheon or dinner parties, to indicate where the guests are to sit. In this way order of precedence is not upset, and the guests find themselves sitting next to people of like interests. The cards can match the menu cards, or plain visiting cards may be used. They are placed either in the centre or just above each guest's cover.

The Cover

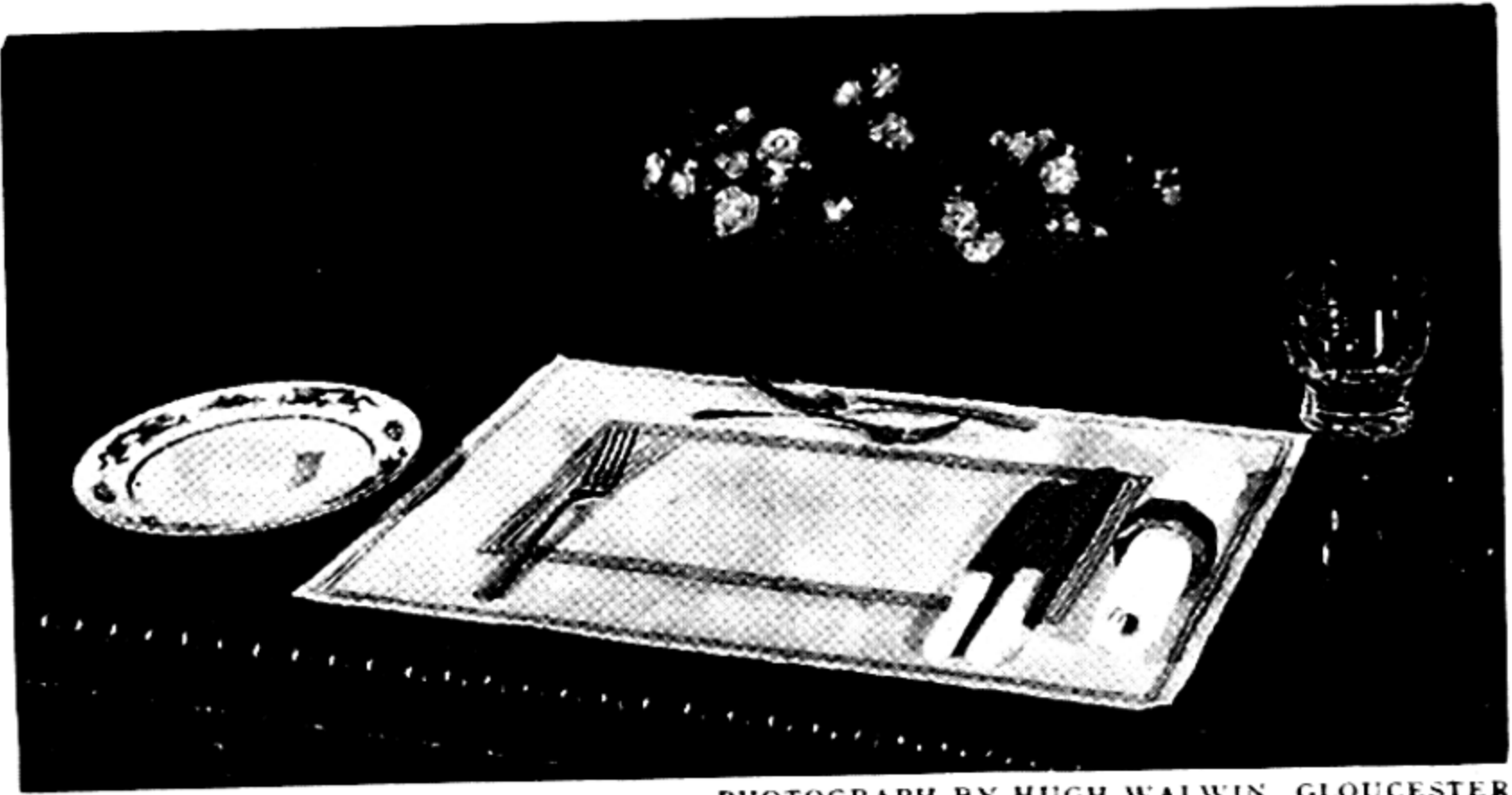
This term is given to that part of the table which is set out, complete with cutlery, knives, and glass, for each person. Twenty-

four to twenty-seven inches of table edge is usually allowed per person, and eleven inches is allowed between the inner knife and fork.

Informal Luncheon or Dinner

This will probably consist of three simple courses:

- (a) A meat (or fish) course.
- (b) A sweet course.
- (c) Biscuits, butter, and cheese, or a savoury.



PHOTOGRAPH BY HUGH WALWIN, GLOUCESTER

COVER FOR AN INFORMAL MEAL

White or red wine, cider, cider-cup, lemonade, or water will be served with the meal.

Each cover will consist of:

- (a) Large knife and fork (or fish knife and fork).
- (b) Dessertspoon and fork.
- (c) Cheese knife.
- (d) Cheese plate.
- (e) Table napkin.
- (f) Bread, or a roll, or toast in a toast rack.
- (g) Glass tumbler for cider, cider-cup, lemonade, or water, and wine-glass for red or white wine.

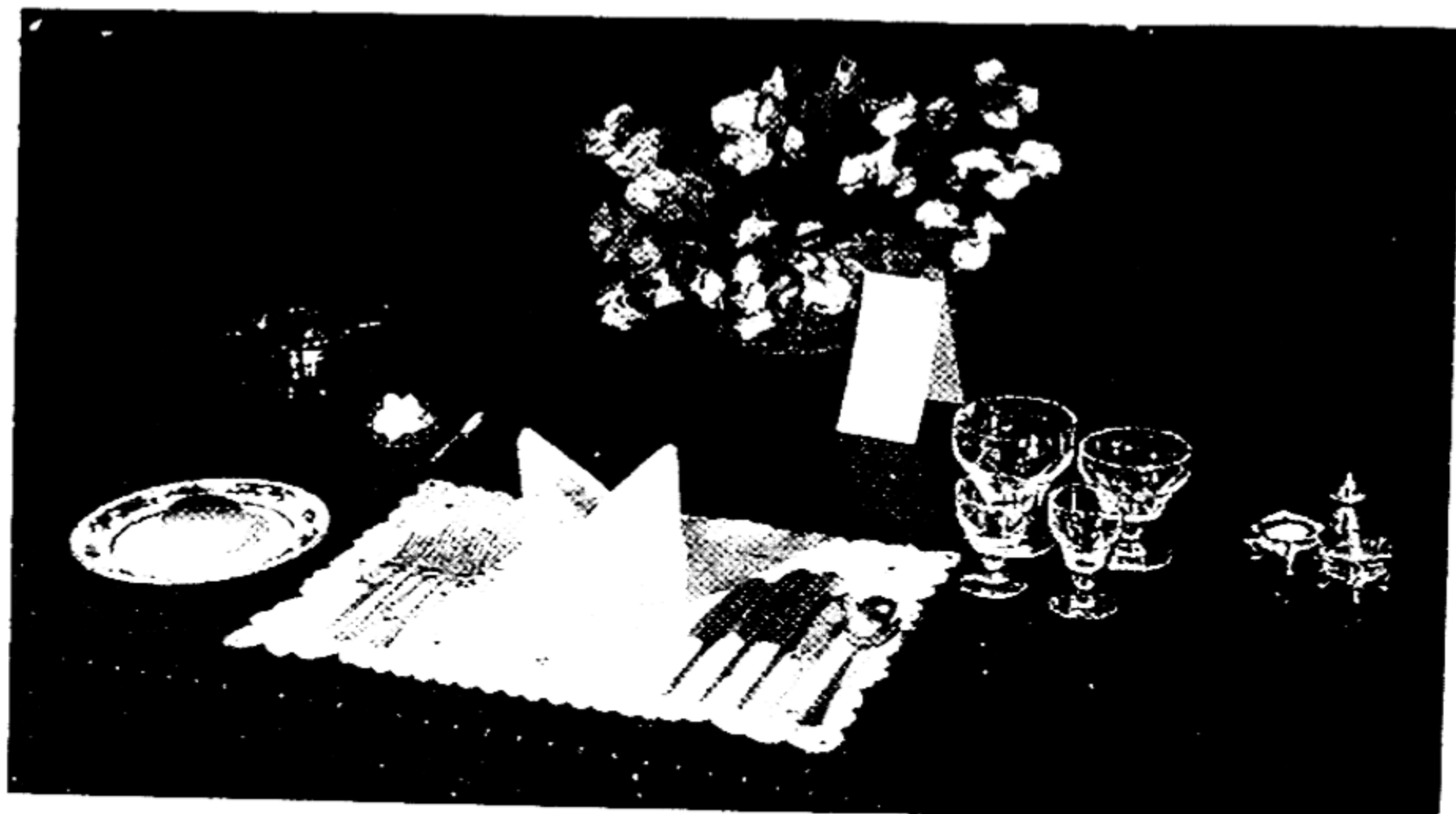
Formal Luncheon or Dinner

This will consist of a large variety of dishes for each of which special cutlery and silver is served.

Course 1

This may consist of one of the following:

- | | |
|-------------------|--|
| (a) Hors d'œuvres | Small fork |
| (b) Grape fruit | Teaspoon or grape-fruit spoon |
| (c) Melon | Dessertspoon and fork, or fruit knife and fork |
| (d) Oysters | Small fork |
| (e) Smoked salmon | Fish knife and fork. |



PHOTOGRAPH BY HUGH WALWIN, GLOUCESTER

COVER FOR A FORMAL MEAL

Course 2

Soup

A tablespoon, or a specially shaped soup spoon

Course 3

Fish

A fish knife and fork

Course 4

Entrée

A large knife and fork

Course 5

Roast

A large knife and fork

Course 6

Sweet

A dessertspoon and fork

Course 7

Savoury

A small knife and fork.

Course 8

Dessert

A fruit knife and fork

A *small knife* is used throughout the meal for buttering toast, roll, or bread.

NOTE. The cutlery and silver for Courses 2, 3, 4, and 5 only are placed on the table for each diner, the remaining cutlery being placed by each guest just before the course is served, or laid ready on the plate before it is handed to the guest. In addition to the cutlery and silver, each cover must be supplied with:

- (a) Table napkin.
- (b) Cheese plate.
- (c) Place card.
- (d) Bread cut in thick squares, roll, or toast.
- (e) Glass:
 - (i) Sherry glass.
 - (ii) Burgundy or claret glass.
 - (iii) Champagne glass
 - (iv) Tumbler for water, soft drinks, or spirits.
 - (v) Port glass. This is placed by the side of each guest at the beginning of the dessert course.
 - (vi) Liqueur glass. This is placed by the side of each guest during the dessert course.

} Four glasses
only are put on
the table

When placing the silver and cutlery, arrange the soup spoon to the outside, with the fish knife and fork inside, and the knife and fork for the entrée and the roast on the inner side again. Thus it is that the correct spoon or knife and fork is always on the outside, ready for use.

The glasses are placed either in a square or diamond formation by the side of the bowl of the soup spoon. The largest glasses are placed farthest from the table edge.

Dessert

The china service used for this course is different from that used for the other part of the dinner. The plates used are very frequently of much finer and more beautiful china than the remainder of the service and are often decorated with hand-painted flowers and fruits. On each plate is placed a small decorative mat and on this a finger bowl, with the dessert knife and fork lying each side of the bowl. The mat may be of lace, fine silk, or lawn, and the finger bowl of fine glass, half filled with tepid water, on top of which may float a few flower petals or small flower heads. The water must not be warm enough to make the glass 'steamy'; the flower petals give colour and scent. The preparation of finger bowls must be done

before the meal, and the ready-prepared dessert plates may stand on the sideboard until such time as they are required. After the savoury the table should be completely cleared of everything except the small dishes of chocolates, sugared almonds, ginger, salted almonds, and any individual glasses which may contain wine. This clearing is most easily accomplished by two maids, one to hold the tray, while the other removes silver, cutlery, china, glass, mats, from the table to the tray. The table should then be brushed to remove any crumbs. A special crumb brush, or folded table napkin should be used for this. The prepared dishes of fruit, nuts, etc., are placed on the table, not handed to the diners.

Serving Spoons and Forks

A. *At an Informal Meal*, i.e. where the serving is done on the dining table, the position varies, some housewives liking one position, some another.

- (i) Tablespoons may be laid across the corners of the table with the cruets in between.
- (ii) Other knives and forks may be placed outside, or above, the host or hostess's cover or may be brought in with the dish and placed on either side of it.

NOTE. The host generally carves and serves meat, fish, etc. The hostess serves vegetables and then sweet courses.

B. *At a Formal Meal*. The knives, forks, and spoons are all laid on the sideboard or side table, and the correct ones are placed on the dish before it is handed.

Notes on the Laying of a Table

- (i) Collect everything which is required and see that it is spotlessly clean and well polished.
- (ii) Table napkins should be given very simple folds, which should be pressed in with a warm iron.
- (iii) The ends of the handles of forks and spoons should form an even line parallel with the edge of the table, and about one inch in from the edge.
- (iv) Sufficient space must be left for the plate to fit easily between the innermost knife and fork.
- (v) Glasses should never be turned down on the table.
- (vi) Nothing should be poured into the glasses before the diners enter the room. This is traditional, as in past centuries it was possible to add poison to a prepared glass of wine which had been poured out in the absence of the guests.

Breakfast

There are two methods of laying a breakfast table:

A. With the beverages and breakfast dishes on the table. The hostess pours out the tea or coffee, and the host serves the eggs, bacon, etc. This is sometimes known as a formal breakfast, all guests being expected to arrive within a minute or two of the breakfast gong.



PHOTOGRAPHED BY COURTESY OF JOHN LEWIS AND COMPANY LIMITED

TEA TRAY

B. With the beverages and breakfast dishes on a heater placed on a side table or on the sideboard. This is sometimes known as an informal breakfast, people helping themselves as they arrive.

Tea

There are two methods of serving tea:

A. *Informal* (or Nursery), when the meal is laid and people sit round the table.

B. *Formal* (or Drawing-room). In this case the meal is prepared in the kitchen and is brought into the drawing-room on a tray, with the cakes, sandwiches, etc., on a cake stand. Plates, cups, saucers, hot-water jug, teapot, etc., should be arranged on the tray

with care so that everything can easily be reached and handled. The food is cut up or divided in such a way that it is ready for eating.

Invalid's Trays

- (i) These must be very daintily arranged, spotlessly clean, and complete in every detail.
- (ii) Double plates should be used for keeping the food hot.
- (iii) Food covers should be used for covering hot dishes whilst the tray is being carried from the kitchen to the invalid's room.
- (iv) A suitable drink should be served.
- (v) A small bell should be placed on the tray.
- (vi) Add a special point of interest to the meal in the form of a small flower, a posy of little flowers, a letter, or the day's newspaper.

WAITING AT TABLE

This requires a great deal of practice if it is to become really perfect.

- (i) The parlourmaid must be neat and trim, with clean, well-cared-for hands.
- (ii) She must be quick, quiet, and light in all her movements.
- (iii) She must be observant and constantly on the alert.
- (iv) The laying and serving of meals must be carefully organized so as to avoid delay and confusion.
- (v) She must not take part in or even appear to notice any of the conversation at the table.
- (vi) She must accustom herself to carrying two things at a time and must learn to keep her hand under the dish; thumbs should not come over the surface.

NOTES

LAYING OF MEALS—WAITING AT TABLE · NOTES

CHAPTER XVIII

CHOICE, CLEANING, AND CARE OF SINKS—CLEARING-AWAY AND WASHING-UP

SINKS

Types of sinks found in a house:

- (a) Scullery.
- (b) Pantry or parlourmaid's sink.
- (c) Housemaid's or slop sink.

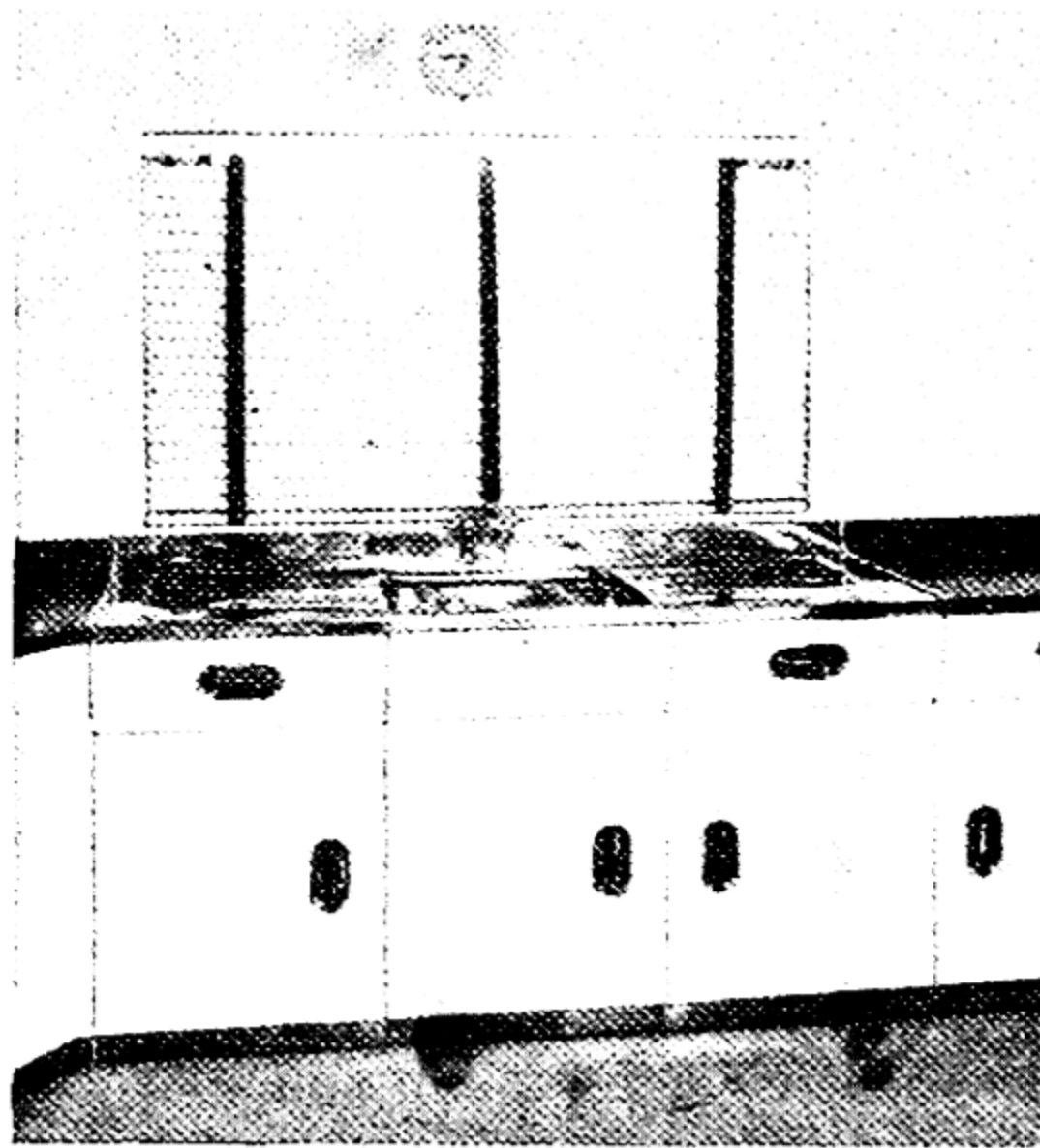
Substances used in the Construction of Sinks

- (a) Porcelain. Easy to keep clean but expensive.
- (b) Tiles. Easy to keep clean but expensive.
- (c) Glazed earthenware. Most generally used.
- (d) Stone. Difficult to keep clean and therefore unsuitable.
- (e) Slate. Difficult to keep clean and therefore unsuitable.
- (f) Wood. Used only for pantry or parlourmaid's sinks. Teak is the best wood for the purpose.
- (g) Sheet lead. This is used occasionally to line a wooden sink.
- (h) Galvanized iron. This is generally used for scullery sinks in institutions where there are large numbers of saucepans to wash up, and the wear and tear on the sink is considerable.
- (i) Monel metal, or other 'staybrite' metals. Sinks and draining-boards can be made in one piece, pressed out of a single sheet of these metals.

A good Sink should conform to the following Points:

- (i) The substance should have a glazed or smooth surface. Grease adheres to a rough surface, which is therefore difficult to keep clean.
- (ii) The floor of the sink should slope towards the waste-pipe.
- (iii) The dimensions of the sink should be correct:
 - (a) Length. } These vary according to the size of the kitchen
 - (b) Breadth. } and the amount of work which is done in it.
 - (c) Depth. This is very important. A scullery or kitchen sink should be deep enough to allow the washing of dishes in it. A very convenient depth is 9 in. to 10 in.

- (iv) The height of the sink from the floor should be such as to enable the worker to maintain an upright position, and this can be gauged by placing the finger-tips lightly on the floor of the sink.
- (v) The top of the waste-pipe should be fitted with a perforated grating, also with a rubber plug, usually $1\frac{1}{2}$ in. in diameter, and chain.
- (vi) The sink should be fitted with an overflow grating and pipe.



'ENGLISH ROSE' KITCHEN EQUIPMENT

A MODERN SINK AND ITS SURROUNDINGS

- (vii) The taps should be of some suitable labour-saving material. They should be sufficiently high above the sink floor to allow a bucket to stand easily in it.
- (viii) There should be a draining-board on either side of the sink. These should be as long as possible to facilitate the washing-up and should slope slightly towards the sink to enable water to drain away easily.

Substances used:

- (a) Teak, a very hard wood. It is grooved and fitted with a slightly raised protective edge.

- (b) Enamel. This is most hygienic as the enamel cannot absorb moisture or grease, is extremely easy to clean, and does not lose its colour.
- (c) Asbestos. This is a light, inexpensive material, which is highly compressed and given a glazed finish.
- (ix) The waste-pipe should be carried through an outside wall to end over a gully, which should contain a grease bucket with a grating over the top.
- (x) The waste-pipe should provide an S trap under the sink fitted with a screw cap.
- (xi) A shelf underneath the sink or draining-board is useful for holding cleaning materials. It should be covered with oil cloth or linoleum.
- (xii) The sink should be fitted on an outside wall, below a window. This enables:
 - (a) The waste water from the sink to be quickly and easily carried out of the room.
 - (b) The work in the sink to be carried out in the best light.
- (xiii) The wall round a sink should be of some smooth, easily cleaned substance, e.g. tiles, sheet enamel, washable distemper or oil paint.
- (xiv) The floor immediately beneath and around the sink should also be of some smooth, easily cleaned, waterproof substance. The best substance is tiles, the hardness and coldness of which can be minimized if the worker stands on a slatted, wooden board.
- (xv) A rubber mat or wooden rack may be placed inside the sink to protect the surface from being scratched, chipped, etc.

Cleaning of Sinks

A. *Daily*

- (i) Empty, clean, rinse, and dry the sink tidy if one has been used.
- (ii) Scrub, rinse, and dry the draining-boards.
- (iii) Wash the sink. Stains should be removed with Brooks's soap.
- (iv) Rinse and flush well first with hot water, and finally with cold water.
- (v) Rub up the taps.

B. *Weekly*

- (i) Remove brushes and cleaning materials from the shelves and draining-boards, and plates, dishes, etc., from the plate rack.
- (ii) Empty, clean, rinse, and dry the sink tidy.

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- (iii) Dust or sweep any ledges above and below the sink.
- (iv) Wash the paint work of the window and window-frame.
- (v) Wash the wall surrounding the sink.
- (vi) Wash the parts underneath the sink, including the trap and any pipes.
- (vii) Scrub, rinse, and dry the draining-boards.
- (viii) Scrub the sink, using hot, soapy, soda water and a scrubbing brush or sink brush. Remove stains with Brooks's soap. Scrub the plug chain.
- (ix) Rinse the sink thoroughly with hot water and then with cold; a little disinfectant should be added to the last rinsing water.
- (x) Dry the sink thoroughly with a net cloth.
- (xi) Clean the rubber plug with paraffin.
- (xii) Clean the window, using warm water and ammonia, allowing one teaspoonful of ammonia to a quart of water.
- (xiii) Replace all plates and dishes in plate rack.
- (xiv) Replace all cleaning apparatus on shelf or draining-board.
- (xv) Scrub, rinse, and dry the floor. Pour the dirty water down the outside gully.
- (xvi) Flush the outside gully with a bucketful of hot water.

Taps

Substances used

- (a) Brass. Most unsuitable as they require frequent polishing and rubbing up.
- (b) Enamelled iron. Very easy to clean but very easily chipped, thus exposing the iron, which very soon begins to rust.
- (c) Porcelain. Used only for handles of lever taps, which are not very often used on sinks.
- (d) Chromium or monel metal. Expensive, but very satisfactory, as it does not rust or tarnish and is very quickly rubbed up.
- (e) Wood. Used for the handles of lever taps controlling a hot-water supply.

Housemaid's Sinks

These are used for the disposal of waste water from bedrooms and are built on the same principle as a lavatory, being flushed by cold water discharged from a cistern and controlled by a plug and chain. They are also supplied with hot and cold water. They are much lower than an ordinary sink, to enable heavy buckets of water to be easily emptied. They are generally square in shape, made from glazed earthenware, white in colour, and the front edge protected by

a bar of teak wood against which the buckets can rest. If there was no protective bar the glazed earthenware would get very chipped. They are sometimes fitted with a hinged grating on which a bucket can stand whilst it is being filled with water. The back wall of the sink is vertical.

Cleaning

A. *Daily*. As for a lavatory. See page 211.

B. *Weekly or Periodical*. As for a lavatory. See page 219.

CLEARING-AWAY AND WASHING-UP

These two pieces of work have to be performed after every meal; therefore make the work as easy as possible by having a definite method and routine. Always aim at improving the method and arrangement until the work is accomplished as perfectly as possible, with the least amount of labour and in the shortest possible length of time.

If one minute only is saved in the washing-up of each meal:

				4 minutes will be saved daily
	28	„	„	„ weekly
24 hours, 20	„	„	„	yearly

The saving of time is important, but even more important is the saving of mental and physical fatigue.

Clearing-away

By the use of a trolley time and labour can be conserved, but owing to the unevenness of the floors in many houses, particularly old ones, the use of a trolley is not always possible. A hatchway built between dining-room and kitchen is another time-saver when clearing-away is being done.

If both these modern methods are impossible then a tray must be used. In the past the old-fashioned tray held in front of the worker resulted in the adoption of a very bad posture. To prevent this modern trays are being constructed which can be carried by one hand, the arm hanging at the side in a natural attitude that does not throw an unnecessary strain on the internal organs.

Points to remember when clearing-away

- (i) Keep the clean things separate from the used crockery.
- (ii) Pile like things together.
- (iii) Pile smaller things on top of the larger.
- (iv) Do not pile cups or tumblers inside one another.
- (v) All pieces and bits of food should be placed on one plate.
- (vi) See that everything is cleared from the table.

Washing-up**A. *The Work Circuit***

This can be either from left to right or from right to left. No hard-and-fast rule can be laid down about this as the position of doors, windows, and sink all affect the arrangements of the work circuit.

B. *Apparatus and Equipment*

- (i) The sink should be the right size and fitted correctly.
- (ii) There should be a draining-board on either side. All the dirty china and glass is placed on one board, and after washing and rinsing is transferred to the other board, thus clean and dirty china, etc., do not get mixed up. If two draining-boards are not possible a table or the trolley may be used as a substitute.
- (iii) There should be a good supply of hot water, cleansers, such as soap and soda, cleaning equipment, such as washing-up mop, net cloth, steel wool, saucepan brushes or scrubbers, and drying-up cloths.

C. *Preparation*

- (i) Empty away the remains of tea, wine, water, etc.
- (ii) Food left on dishes, butter in a butter dish, and milk in jugs should be transferred to old clean plates, etc., and put into the larder.
- (iii) Marmalade, jam, or honey should be returned to the pot.
- (iv) Milk jugs should be rinsed under the cold-water tap, filled with cold water, and left to soak on the draining-board.
- (v) Other dishes or sauce boats which may have contained milky or floury foodstuffs should be treated in the same way.
- (vi) Tea-pots can be drained of tea, and the tea leaves emptied out on to a piece of newspaper and rolled up tightly.
- (vii) Scraps from plates should be put into newspaper and rolled up tightly.
- (viii) Knives should be wiped with newspaper and put to soak in a jug or jam jar of hot water and soda.
- (ix) Greasy plates should be wiped with newspaper.
- (x) Burn all the paper in which scraps, etc., have been rolled.
- (xi) Have ready a bowl of very hot water for rinsing.

Order of Work

- (i) Wash and rinse the cleanest things first.
 - (a) Glass.
 - (b) Silver.
 - (c) Cleanest china.

- (ii) Add more hot water and soda and wash and rinse the greasy things:
 - (a) Knives.
 - (b) Greasy plates.
- (iii) If necessary empty the sink, refill with hot water and finish washing and rinsing the greasy dishes.
- (iv) Wash and rinse all the utensils used in the preparation of a meal.
- (v) Wash and rinse all saucepans.
- (vi) Use the correct cloths:
 - (a) Knife cloth for drying knives.
 - (b) Glass " " glass and silver.
 - (c) Pantry " " china.
 - (d) Kitchen " " crockery used for cooking.
 - (e) Net " " baking tins, saucepans, etc.

NOTE.

- (i) All silver and china should be given a final rinsing in very hot water.
- (ii) All plates, dishes, and saucers should be air dried in a plate rack placed on the wall immediately above one draining-board. This method saves time and labour, and after a final rinse in very hot water (160° F.) the plates dry by evaporation very quickly.
- (iii) All bowl-shaped glass and china must be towel dried.

E. *Final Clear-up*

- (i) Put away all glass, china, silver, and cutlery into their correct drawers and cupboards.
- (ii) Empty the rinsing bowls and dry with the net cloth.
- (iii) Empty the jam jar used for soaking knives, rinse and drain dry.
- (iv) Rinse the washing-up mop, squeeze dry, and shake out of the window and leave to dry.
- (v) Wipe down the draining-boards, using the net cloth.
- (vi) Rinse the net cloth, and hang in the open air to dry.
- (vii) Empty and rinse the sink.
- (viii) Leave the kitchen (or scullery) quite clean and tidy.

CARE OF SINKS—CLEARING-AWAY AND WASHING-UP

NOTES

CHAPTER XIX

ENGAGING AND MANAGING OF SERVANTS—HOUSEHOLD TIME-TABLES—QUALIFICATIONS AND DUTIES—INSURANCE OF SERVANTS

ENGAGING AND MANAGING OF SERVANTS

IN all types of houses the problem of employing some kind of paid labour will probably have to be considered.

The engaging and management of servants is one of the hardest problems that any housewife has to face. Experience of life, a reasonable, balanced outlook, an understanding of human nature, an expert knowledge of all the practical work to be done in a house, and a sense of humour on the part of the housewife, all combine towards producing the ideal relationship between mistress and maid.

Methods of obtaining Maids

- (a) Through personal recommendation—this is the most ideal method.
- (b) Through a Registry Office. This necessitates the payment of various sums of money, ranging from 2s. 6d. upwards, before an application for maids can be made. Frequently fees are paid but no suitable maids are available.
- (c) Through advertisements in local papers. This entails the cost of the advertisement.
- (d) Through the local Labour Exchange.

References

Every prospective maid should be able to give the name and address of some person who can vouch for her honesty, reliability, or knowledge of work. In the case of a young girl who has had no previous experience reference may be made to the head mistress of her school, a clergyman, or captain of the Girl Guides. In the case of a more experienced maid the referee will probably be her last employer.

It is advisable to have an interview with, telephone, or write direct to the person given as a reference. It is never advisable to accept a written testimonial in the possession of the prospective maid as it may prove to have been faked.

Interview

- (i) If the references are satisfactory, the maid should be given an interview in the house where she is to work. She may then see the house, the kitchen, and the room in which she is to sleep.
- (ii) The duties and the work which the maid is to undertake must be clearly stated.
- (iii) Information regarding wages, and any increments must be given.
- (iv) State the amount of free time which will be given daily and weekly, and also make arrangements about the yearly holiday.

NOTE. Any expenses entailed by a servant in attending an interview are paid by the prospective mistress, whether she engages the girl or not.

Written Agreements

These are hardly ever used when engaging domestic servants, except when a mistress pays a large fare or the expenses of a voyage to obtain a servant's assistance, when she naturally desires a reasonable period of service in return for her expenditure. If a written agreement is drawn up and signed it need not be stamped.

Dismissal of Servants

- (i) A servant may be dismissed without reason by giving the customary month's notice. It is, however, usual to give a reason.
- (ii) The servant may terminate her contract by giving a month's notice.
- (iii) In the case of instant dismissal the employer may give a month's wages in place of the month's notice.
- (iv) It is generally held that the first month's service is a trial month and that the engagement may be terminated by either side giving notice at the end of the first fortnight. This custom has not received judicial sanction.

Instant Dismissal

The following causes justify instant dismissal without wages:

- (a) Immorality.
- (b) Wilful disobedience to reasonable and proper orders.
- (c) Drunkenness.
- (d) Dishonesty.
- (e) Incompetence to do specialized work for which he or she may have been engaged, such as laundry work or driving a car.

- (f) Habitual negligence or misconduct which might seriously damage an employer's affairs, i.e. a doctor's maid answering the telephone badly or untruthfully, a dentist's parlour-maid habitually answering the door bell negligently.

NOTE. Permanent inability to work caused by illness also justifies instant dismissal, but wages should be paid up to the date of leaving, and in many cases would be paid up to the end of the month. Temporary illness does not justify instant dismissal.

The giving of References and Characters

- (a) An employer cannot be compelled to give a character to a servant. It is, however, very unkind and wrong to refuse to do so through laziness or thoughtlessness, as the worst may be inferred against a good servant. It is a moral duty to furnish a servant with a character or reference.
- (b) A reference must be accurate, although it may be good, bad, or indifferent. It is a serious matter to furnish a bad servant, e.g., one guilty of embezzlement, with a good character, and may expose the giver to very serious consequences, such as an action for damages and imprisonment for a misdemeanour if the servant should injure the new master by similar conduct.
- (c) If serious accusations are made against a servant, and they are perfectly true, the giver of the character runs no legal risks, providing they are made in good faith, and without malice.
- (d) Prospective employers' inquiries as to servants' characters may safely be answered if they ask why a servant was dismissed, provided the answer is true and not malicious.
- (e) It is as wrong to keep back relevant facts as it is to invent untrue ones.

NOTE. If a servant's character is given untruthfully, injuriously, and with malice the giver is liable to proceedings for damages and slander.

Uniform

Much has been said and written for and against maid-servants' uniform. The fact remains that modern uniform can be charming to look at, inexpensive to buy, extraordinarily well-made

and well-fitting, can be bought ready-made in many different styles, colours, and materials, can easily be laundered, and finally is well designed to enable practical work to be performed without any uncomfortable feeling of restriction.

Uniform is generally insisted on in large houses and in institutions, particularly for maids who answer the door, or who attend on dining- and sitting-rooms. Maids are expected to provide their own uniform.

The Morning Uniform consists of a dress or overall of coloured cotton material, with the addition of a white cotton apron and a simple form of cap. The dress or overall is frequently made in the simple coat-overall style, with or without short sleeves. The skirt should not be too long or too full, and the neck, waist, and arm-holes should fit easily and without constriction.

The Afternoon Uniform allows of more variation in colour, style, and material. The usual afternoon uniform consists of a black or dark-coloured dress with a small fancy apron and cuffs, collar, and cap to match. So long as the dress is neat the details of its shape may be left to the individual taste of the maid.

Rigid uniform is not insisted upon in the case of a single-handed maid, but the clothes she wears must be clean and neat, the hair well cared for and neatly dressed.

Specially designed uniforms, or uniforms of a special colour. If these are required it is usual for the housewife to provide them, and consequently the uniform remains in her possession, and may not be taken away by the maid when she leaves.

HOUSEHOLD TIME-TABLES

Time-tables are usually connected with schools and similar places of education, or with railways. They are also extremely valuable when planning the work of a house, particularly when the house is large and there are two or more workers in it. The use of house time-tables prevents overlapping of work, avoids much confusion, and ensures, as far as is humanly possible, that every part of the house is systematically cared for and cleaned. Their use also prevents one worker from being overworked, whilst another does less than his or her fair share. Time-tables should be most carefully drawn up, and each worker should be given a copy of her own. Copies may also be pinned on the inside of a cupboard door, where they are inconspicuous but serve as a reminder of work to be done.

They are also easily available for consultation by the housewife in moments of uncertainty or emergency.

Time-tables should show clearly

- (i) The time of rising and starting work.
- (ii) The time of meals and the time allowed for each meal.
- (iii) The daily and weekly work to be done.
- (iv) The daily free time.

Making House Time-tables

- (i) Except in the case of the experienced housewife, the 'trial and error' method will probably have to be followed, until such time as a good smooth-working time-table has been evolved. A young housewife must therefore be prepared for many alterations to her original scheme which, whilst looking excellent on paper, may prove hopelessly unworkable.
- (ii) Time-tables can only be satisfactorily made out if the maker has a good practical knowledge of all the work that is being planned.
- (iii) The work should not overlap, i.e. the weekly cleaning of a bedroom and the serving of lunch.
- (iv) Work requiring the same apparatus should not appear on two different time-tables at the same time.

QUALIFICATIONS AND DUTIES OF MAIDS

In all cases it is desirable that the maids should be clean, methodical, thorough, good-tempered, strictly honest, and sober.

A. General Maid

This maid runs a house single-handed, except for the help of the mistress or any of the daughters of the house, and occasional help from a charwoman.

Qualifications. She should have some knowledge of cooking, house-work, and laundry-work.

Duties. All the work of the house with the help of the mistress, the daughters, or a charwoman.

B. Cook-general

This maid is generally found in a household of one, two, or three maids, who may be cook-general, housemaid, and parlourmaid; or

cook-general, house-parlourmaid, and nurse. The arrangement varies according to the family.

Qualifications. The same as for a general maid, but with a greater knowledge of cookery and some knowledge of catering.

Duties

- (i) All the cooking and all the work connected with the kitchen, scullery, larder, and store cupboard.
- (ii) Daily and weekly cleaning of the dining-room, front hall, and porch and entrance, including any front door brass and front door-step.
- (iii) Answering the back door all day, attending to tradespeople, and checking all goods which may be sent.
- (iv) Answering the front door bell during the morning when the house parlourmaid is working in the bedrooms upstairs. If a parlourmaid is kept then the cook-general does not answer the front door bell.
- (v) Cleaning shoes.
- (vi) Keeping clean all the kitchen cloths and cleaning equipment.
- (vii) Preparing shopping list for the mistress; and should be ready with suggestions for meals, etc.

C. Cook

This maid would be part of a household staff of three or more maids.

Qualifications

- (i) A good knowledge of cookery in all its branches.
- (ii) Thrifty, methodical, and punctual.
- (iii) Extremely clean in work and person.

Duties

- (i) All the cooking, with or without the help of a kitchen or scullery maid.
- (ii) The daily and weekly cleaning of the kitchen, scullery, larder, store cupboards, etc.
- (iii) The cleaning of all the kitchen equipment.
- (iv) The arrangement of and suggestions for menus during the housewife's absence or during illness or other emergency.
- (v) Preparation of tradesmen's orders.
- (vi) Answering the back door all day, attending to tradespeople and checking all goods which may be sent.
- (vii) She may be required to clean her own bedroom

D. Housemaid

Qualifications

Cleanliness, neatness, and quietness.

Duties

- (i) Cleans all bedrooms, bath-rooms, lavatories, sitting-rooms (except the dining-room), landings, upstairs corridors, and staircases.
- (ii) Answers all bedroom bells.
- (iii) Lights and looks after bedroom fires. If necessary carries coal to bedrooms.
- (iv) Carries up meals to bedrooms. Does not necessarily prepare the trays.
- (v) Is sometimes responsible for the care of household linen, the collection of dirty linen, listing and sending to the laundry. Checking it on its return and putting it away.
- (vi) Cleans all bedroom silver and may help with table and ornamental silver.
- (vii) May be responsible for washing small household things, and certain things belonging to her mistress—gloves, stockings, and very fine underwear.
- (viii) May be responsible for her mistress's clothes—cleaning shoes, pressing frocks, putting out evening clothes, putting away day clothes, etc.

E. Parlourmaid (sometimes called a **Table-maid**)

Tallness is an advantage to a parlourmaid, who is usually a very experienced maid, having probably gained experience as housemaid and house-parlourmaid before becoming parlourmaid. She may also have received some of her parlourmaid's training under a butler. She should have a knowledge of carving and of wines.

Duties

- (i) Daily and weekly cleaning of the dining-room, and sometimes of the front hall and other living-rooms in addition.
- (ii) The laying, serving of, and waiting at meals.
- (iii) The care of all table linen, table silver, glass, and china.
- (iv) The care of wines, spirits, fruits, flowers, and cakes for afternoon tea.
- (v) Answering the front door bell and the telephone all day.
- (vi) The lighting and looking after of all fires on the ground floor.
- (vii) The laundering of small pieces of table linen, mats, tray cloths, etc. She may have to be responsible for collecting and listing all dirty table linen before it is sent to the laundry, and checking and putting it away on its return.
- (viii) Looking after the master's clothes, in much the same way as the housemaid looks after the mistress's clothes, putting out evening clothes and pressing suits.

F. House-parlourmaid

This maid combines the work of both housemaid and parlourmaid in a small house, where much table work or valeting is not required.

G. Kitchen Maid

This is always a young maid, who may have already had some experience as a scullery maid. She is usually ambitious to become a cook. Her work is generally arranged by the cook, who is responsible for training her in simple cookery.

Duties

- (i) Daily and weekly cleaning of the kitchen, scullery, larder, and store-cupboard, under the supervision of the cook.
- (ii) The cleaning and preparing of vegetables and of ingredients or parts of certain dishes in order to help the cook.
- (iii) A certain amount of plain cooking when the cook is off duty.
- (iv) Laying, serving, and washing-up the household staff's meals.

H. Scullery Maid

This is generally a very young maid who is in her first post. Her work and duties are generally arranged by the cook.

Duties

- (i) Daily and weekly cleaning of the servants' hall, larder, back kitchen, back yard, and back door steps.
- (ii) Laying and serving the household staff's meals and washing-up afterwards. This work may be shared with the kitchen maid.
- (iii) The preparation of all vegetables and the simple cooking of those vegetables which are to be served in the servants' hall.
- (iv) Washing-up of all cooking utensils used by the cook and the kitchen maid during the preparation of meals.

NOTE. In a text-book of this size and scope it is impossible to include details of the work of such servants as may form part of the household staff of large houses.

THE NATIONAL INSURANCE SCHEMES

The main National Insurance scheme provides, in return for regular weekly contributions:

- (a) Cash benefits during sickness and unemployment.
- (b) Allowances on widowhood and for guardians of orphans.
- (c) Payments at childbirth and death.
- (d) Pensions on retirement from regular work.

This scheme is compulsory for nearly everyone (except married women) in England, Scotland, and Wales, between school-leaving age and pension age.

NOTE. A married man's contributions provide not only for his personal benefits but also for certain benefits for his wife and family.

The Industrial Injuries scheme provides:

- (a) Cash benefits for those who, because of an accident at work or certain industrial diseases, are unable to work or are disabled.
- (b) Cash benefits for widows and certain other dependants of industrial casualties.

This scheme is compulsory for everyone, including married women working for an employer.

It does not cover

- (a) The self-employed;
- (b) The non-employed.

To meet the costs of both schemes, the money is obtained from:

- (a) The contributions of insured people and employers.
- (b) Taxation.
- (c) Interest on the investments of the National Insurance Funds.

Contributors, e.g. everyone between school-leaving age and pension age can be divided into one of three classes:

- (1) Employed persons.
- (2) Self-employed persons. Mainly those in business on their own account and others who are working for gain but not under a contract of service.
- (3) Non-employed persons, e.g. all those not in class 1 or 2.

Contributions. These are paid weekly, generally by sticking special national insurance stamps on to a national insurance card.

Employers are responsible for sticking the correct stamp on to the insurance card of each employee for every contribution week. He can then deduct the employee's part of the contribution from the wages or salary paid for that week.

Self-employed and non-employed contributors must stamp their own cards weekly.

Benefits to which the insured person becomes entitled in return for contributions are:

- (a) Sickness Benefit.
- (b) Unemployment Benefit.
- (c) Maternity Benefit, which includes:

- (i) Maternity Grant—this may be paid on either the mother's own insurance or her husband's, but not on both.
- (ii) Home Confinement Grant—this is paid if the baby is born at home or elsewhere not at the public expense.
- (iii) Maternity Allowance. It is a condition that the mother does no work besides her own domestic duties while she is drawing the maternity allowance.
- (d) Guardian's Allowance—paid to the person who takes into his family an orphan child, both of whose parents or step-parents are dead.
- (e) Widow's Benefit, which includes:
 - (i) Widow's Allowance.
 - (ii) Widowed Mother's Allowance—an additional allowance for each dependent child.
 - (iii) Widow's Pension.
- (f) Retirement Pension. This is increased if the person concerned stays on at work after reaching the official retiring age.
- (g) Death Grant.
- (h) Industrial Injuries Benefits:
 - (i) Injury Benefit.
 - (ii) Disablement Benefit.
 - (iii) Benefit for widows and dependants.

The National Health Service

The National Health Service is often confused with the National Insurance Scheme, and its medical, hospital, dental, and other services are often believed to be paid for out of national insurance contributions. This is not so. The National Health Service is a completely separate scheme, and its services are available to everyone in Great Britain whether or not they are paying National Insurance contributions.

Only a small percentage of the combined national insurance contribution of an employer and an employee is allocated to the National Health Service. The remainder of the contribution goes into the National Insurance Fund and the Industrial Injuries Fund to pay for the cash benefits and pensions.

SERVANTS—TIME-TABLES—DUTIES—INSURANCE

NOTES

CHAPTER XX

TIME AND MOTION STUDY

TIME and motion study is no new subject nor is it peculiar to domestic science. It has been known for hundreds of years—the pithy saying of our grandmothers, ‘Make your head save your heels,’ puts the whole problem in a nutshell. Time and motion study is widely practised in industry and in many other activities, ranging from surgery to motor racing. One example of simple time and motion study is to be found in the ‘human chain’ used to transport buckets of water for fire-fighting purposes, the heavy buckets being swung from person to person with great ease and rapidity. There is also a similar method for transferring a quantity of bricks from one place to another. The workmen space themselves out between, say, the lorry and the dumping ground, and in groups of four or six the bricks are swung from one pair of hands to the next, the work requiring little human effort and being rapidly accomplished.

The objects of household time and motion study can be summarized under the following headings:

- (a) The elimination of fatigue.
- (b) The elimination of unnecessary movement.
- (c) The prevention of waste of time.
- (d) Efficiency—the carrying out of a piece of work in the best possible way.
- (e) The increase of interest in the work to be done and the elimination of boredom.

Fatigue

In a factory great care is given to every detail concerned with speeding up and increasing the efficiency of the work, whilst keeping up a very high standard. Lighting, ventilation, and positioning of equipment should be under the care and management of experts. The result is that the work produced is of the highest possible standard, performed in the minimum of time and with the minimum of effort. In the ordinary house, conditions are generally such that the work is carried out under difficulties which produce unnecessary fatigue and labour, resulting in a low standard of work, and probably with detrimental effects upon the health of the worker.

Fatigue is the diminution of power or desire to work, and it may be either physical or mental, the two being closely allied.

The Elimination of unnecessary Fatigue in House Routine

This can be brought about by a consideration of the following points:

- (i) The physical health of the worker should be good.
- (ii) Food. This should be adequate, well cooked, dished, and served, and a reasonable length of time should be allowed for meals.
- (iii) Clothing. This should be suitable for the work. Constriction and weight should be avoided.
- (iv) The design of the house should be such that long passages and uneven floors are avoided.
- (v) The planning and equipping of the work-centres of the house, e.g. kitchen, cleaning cupboard. See pages 289, 295.
- (vi) Provision of correct tools in proper working order. These should be repaired or renewed when necessary.
- (vii) Worry. The presence or absence of worry considerably affects fatigue.
- (viii) Pressure. Whether mental or physical, pressure can be very fatiguing and pressure and worry may complicate each other.
- (ix) Clutter, both physical and mental. The hoarding of possessions, large or small, important or unimportant, results in much more fatigue than would be experienced by a housewife who has learnt the value of space and the joy of the minimum of possessions. Mental clutter consists of unnecessary worry about things which are no concern of the housewife, or about things which may never happen, or if they did would not affect her.
- (x) Monotony. This can be a serious fatigue-producer, but can be banished by interest in the immediate work and in cultural hobbies and outdoor activities.
- (xi) Isolation. In the past this was a serious menace to certain types of housewives, but modern life is rapidly eliminating it.
- (xii) Eye fatigue. Efficient lighting is essential. (See page 323.) There should be no sharp contrasts between light and dark. Certain paints and shiny metal finishes which reflect glare, although attractive in appearance, form a serious factor in eye strain, and should be avoided. Ugliness is believed to be a great source of fatigue, as beauty is known to be a factor of rest.

- (xiii) Ear fatigue. This is caused by the crime of unnecessary noise, unfortunately so typical of this modern mechanical age. In addition sounds which are loud and discordant, too low to be heard without strain, too penetrating, too stimulating or irritating in some other respect are equally fatiguing.
- (xiv) Careful planning of practical work should ensure that whenever possible the worker sits to do certain jobs and standing work alternates with sitting work.
- (xv) Posture. Correct posture whilst doing practical work is of great importance both in allowing the work to be performed quickly and perfectly, and also in eliminating fatigue.
- (xvi) Lack of appreciation. This has been experienced by every housewife. Praise is the greatest incentive and the most satisfying reward.

Fatigue cannot be entirely eliminated from house routine, but by a careful study of working conditions unnecessary fatigue can be avoided and provision made for recuperation from unavoidable fatigue.

Time study and movement study are so closely linked that they cannot easily be studied separately. A consideration of these studies is necessary, mainly for economic reasons. Owing to the difficulty of obtaining and the cost of labour the work of a modern house has to be accomplished by fewer pairs of hands in a shorter space of time. Improved educational facilities and travel have combined to stimulate women to take a wider interest in communal life and to participate in new spheres of work, law, politics, medicine, etc.: if they are to accomplish this, then the mechanics of living must be simplified and quickened.

Critics of the modern home are fond of saying that man lives in the twentieth century whilst his wife keeps house in the sixteenth century. Exaggerated as this charge may be, its general truth must be admitted. The home has obviously not shared in the revolution in productive technique brought about during the last century or so. Methods of work have to a large extent remained almost unchanged, whilst the efficiency of the industrial world has greatly multiplied. It was inevitable that this should be so, because it is through machine production on a large scale that this increase in productive industrial capacity has been brought about. And such methods clearly could not apply to the house.

Time Study

This is important for the following reasons:

- (i) To show the proportion of time allotted to the main activities of the day.

- (ii) To show the percentage of time which may be unproductive.
- (iii) To show the percentage of free time.

Modern conditions of life make it essential for every one to learn to use their time wisely, expeditiously, and economically, and much has to be compressed into twenty-four hours. Rest, meals, work (which in modern life demands a very high standard), leisure, and other activities are the main divisions when working out a time budget. Having arrived at what constitutes a reasonable amount of time for each of these requirements many smaller subdivisions can be made. 'Work' for students can be subdivided into lectures, practical work, and private study; meals into the time allotted to breakfast, lunch, tea, and dinner, all of which vary in length of time.

Time budgets are important and useful to the housewife when by their use she saves physical and mental energy, which in turn allow her to indulge in more outdoor activity, hobbies, and interests outside the home, thus she can help the community in addition to her own family.

Time may be saved in various ways:

1. By the use of time-tables. See page 255.
2. By a very careful arrangement of all the work to be done each day by each worker. This is not easy to arrive at, and the 'trial and error' method is the only satisfactory one. The ideal is for each worker to have the satisfaction of doing the work for which she is best fitted, to work in an atmosphere of understanding and good will, and under conditions which eliminate waste, boredom, fatigue, irritation, and worry. When making household time-tables care must be taken not to fill them so full that it is practically impossible to live up to them. Household management is particularly subject to interruptions which furnish a serious problem to the housewife. A careful study of delays and hindrances often reveals surprising things—the non-arrival of expected help, apparatus requiring renewal or repair, poor tools, lack of supplies. Thus many delays can be avoided if more careful upkeep and inspection is given to apparatus.
3. By avoiding over-pressure, unless the worker has that rare type of mentality which revels in work done under pressure. If time-tables are used as a pressure device they may cause much irritation and fatigue. Their chief aim is to remove pressure.
4. By learning the best method of doing any particular piece of work, so that ability to do the work well may relax the nervous strain, and give the worker a feeling of mastery which the happy-go-lucky 'hit-or-miss' worker never achieves. Many pieces of

practical work such as bed-making, washing-up, laying meals, etc., can be 'standardized.' That is to say, the best organized method based on previous experience can be established. To attain this 'standardization,' the old method should be analysed to find its faults and difficulties. Elimination of the unnecessary and the improvement of what remains can set up new, improved standards. The applications of this principle to bed-making showed that traditional methods must to some extent be abandoned and the housework so planned that whenever possible beds, both single and double, are made by two people. By this arrangement a pair of workers are more than twice as efficient as one worker. When laying tables the use of a small tray, on which to carry the requisite silver and cutlery, enables the worker to pick up at one time all the silver and cutlery required for each 'cover' and to lay it on the table with the minimum number of movements and in the shortest space of time.

5. By concentrating on the work, remembering that 'day-dreaming' is insidious and slows up one's work very considerably.

6. By being suitably and comfortably dressed. Avoid constriction of clothing at arm-holes, wrists, waist, strain at elbows and across the shoulders. The modern use of simple, colourful coat overalls gives brightness and charm, effects a saving of ordinary day clothes, and combines comfort with self-respect and grace. Suitable, comfortable, low-heeled shoes should be worn.

Movement Study

Gilbreth says that there is 'No waste in the world so great as ineffective movements,' and movement study has been defined as a science which will 'improve those movements of the work that are necessary for the effective execution of a given operation; and to abolish those that are unnecessary.'

Expert movement study entails a consideration of skill, dexterity, rhythm, speed, and many other factors, so that a given piece of practical work can be divided into the most elementary sub-divisions possible. Then comes the studying and measuring of these fundamental units and their variables, both separately and in relation to one another and from these studied units the best can be chosen, which can be combined and built up into methods, the performance of which entails the minimum of waste.

Skill is an important factor in movement study, but is very difficult to define. In its highest form it results in the minimum of fatigue for the greatest amount of output, and the least wasteful activity. Unskilled movements are ungraceful, unrhythmic, ugly,

jerky, and show lack of self-expression and satisfaction. The possession of skill makes all practical work interesting.

Dexterity is another aspect of the same attribute, but it is the skill which may be achieved without the worker having any interest or satisfaction in her work. This is frequently seen in factories where girls pack many small articles into boxes with great dexterity but with no interest or satisfaction in the work.

Rhythm

This has been defined as flowing motion. In practical work smooth, rhythmic movements show decision, and reflect the correct mental adjustment behind the motions. Unnecessary movements in practical work may be cut out by:

- (i) The careful planning of:
 - (a) The work-centres of the house.
 - (b) The position of all fixed apparatus.
 - (c) The height of all working surfaces, which should be so arranged as to prevent bad posture.
- (ii) A knowledge of:
 - (a) The exact nature and amount of work required to execute a given job.
 - (b) How to do the work. The longest and hardest way of learning is by constant experiment, the shortest method is by watching and learning from the wisdom of other people.
- (iii) The use of correct tools that are kept in good order. Glaring examples of misuse have been noted in the use of ordinary house scissors for the cutting of grass edges, and the cutting-out of a blouse with a pair of curved nail-scissors.
- (iv) Avoiding constant change from one process to another, as this entails the continual picking up and putting down of tools. In cases where a piece of work is extremely long a change of process is very restful.

It is interesting to note that if the methods of the laziest worker are studied it will be found that she has devised for herself the easiest, least fatiguing method of doing any work.

The benefits of movement study are found in greatly increased skill and increased efficiency, but almost more important are the products, an increased interest in the work, a lessening of boredom, and additional time and energy for hobbies and communal activities.

Rest

The most complete form of rest is to be found in sleep, but partial rest can be obtained at intervals throughout the working day. Partial rest is important to the housewife for the following reasons:

- (a) No standard has yet been set up for a reasonable working day for the home-maker. Overwork and over-fatigue would not be allowed in a factory where the worker's hours are regulated by law. Yet a very large proportion of home-makers are overworked, many being unnecessarily so. An eight-hour day should be aimed at, remembering that home-makers work a seven-day week, in an industry which knows no slack seasons, and which seldom allows for vacations or holidays.
- (b) If a process is very lengthy it may be restful to change occasionally from one kind of movement to another, or from one posture to another. Study the movements made whilst doing a piece of practical work and consider how a change may give rest to the muscles of another part of the body.
- (c) Sit when you can. It is surprising how much work can be done sitting, if the equipment and apparatus is studied with this in mind.
- (d) Apply time and motion study to all work.

NOTES

TIME AND MOTION STUDY • NOTES

CHAPTER XXI

ENVIRONMENT, OUTLOOK, AND SITES OF HOUSES

Environment

The situation of a house is intimately connected with the pleasure which will result from living in the house, but the ideal environment is very hard to find.

A desirable position is one on high ground, surrounded by open country. This open space allows fresh air and sunshine to reach the building, but belts of trees form an effective shield against prevailing cold winds. The trees should not be too near, otherwise they keep out light and air. The presence of fine old trees adds greatly to the beauty of the situation of the house. The top of a hill is not desirable, as it often means an exposed and chilly position.

The situation of houses in close proximity to factories, gas works, sewage disposal works, mental hospitals, or graveyards, etc., should be avoided. The proximity of a church and of educational, recreational, shopping, and transport centres must also be carefully considered. The presence of such town services as water supply, main drainage, electricity, gas, and telephone is also important.

Aspect and Outlook

Sun and fresh air make for good health and cheerfulness, therefore a house should be so arranged as to ensure that the main living-rooms and bedrooms receive a certain amount of sunshine each day throughout the year. The modern method is to face the house south-east or south-west, not due south. Thus direct sunlight will reach more rooms during part of each day than in the case where the house faces the points of the compass. The kitchen and larder should face north, or north-east, in the latter case the early morning sun, which is never as strong as it is later in the day, would reach the room. Dining-rooms should also face north, or north-east, thus having the cheering benefits of the early morning sun. Nurseries should face south-east or south, to catch the late afternoon sun which, particularly during the summer months, makes it difficult for children to go to sleep in the evening. It also tends to overheat the nurseries in the late afternoon. Living-rooms should face south or south-west to have the benefit

of the evening sun, when presumably the living-rooms are being mostly used for rest and recreation. A morning-room, used, as its name implies, mainly in the early part of the day, might face south, or south-east and get the morning sun.

Bedrooms can face south-east, south, or south-west. Rooms which may command a beautiful view, or part of a river, a moor, a lake, wooded hills or mountains add greatly to the charm of any house.

Soil

The health of the family and the building costs of the house are both affected by the type of soil forming the site.

Sites

A. *Natural*

- (i) *Clay soils*. These are impermeable, dry slowly, and do not allow the water to drain away readily or easily. Houses built on this type of soil require thick and reinforced foundations, as there is always the risk of the house subsiding in dry weather when the clay foundation shrinks.
 - (ii) *Gravel*)
 - (iii) *Chalk*)
 - (iv) *Sandstone*)
- These are ideal soils. They drain and dry rapidly.

B. *Made Sites*

- (i) *Reclaimed land* from ponds, pools, marshes, mouths of rivers, etc. This type of site should be avoided, as it is difficult and expensive to drain the ground and to keep it properly drained.
- (ii) *Made soil*. This name is given to any hollow which may have been filled in artificially, generally with refuse from a nearby town or village. The rubbish usually contains a large amount of organic matter which may take years to decompose completely, and therefore the soil should not be built upon for several years.

Ground Water and Ground Air

All soils, except rocks and clay, are more or less porous, containing innumerable tiny spaces which are filled either with ground water or ground air.

Ground water differs considerably from ordinary water and may contain impurities brought from a long distance. Ground air is quite different from atmospheric air. It contains a much larger quantity of carbon dioxide formed by the decomposition of organic

substances in the ground, and a smaller proportion of oxygen which has been absorbed during the oxidation of organic matter.

Movement of Ground Water and Ground Air. The level of ground water varies according to the amount of rainfall, and the movement of tides and rivers. A rise in the level of ground water consequent upon heavy rain will force the ground air upward, which, unless prevented by suitable house foundations, will enter the cellars and basements of the house.

ENVIRONMENT, OUTLOOK, AND SITES OF HOUSES

NOTES

CHAPTER XXII

HOUSE CONSTRUCTION

THE erection of a house depends upon the ideas, knowledge, skill and craft of:

- (i) The prospective owner, who probably supplies the general ideas regarding the size of house, number of rooms, and the inclusion of certain things such as a study, studio, or work-room.
- (ii) The architect, who acts as professional adviser to the prospective owner and who possesses the special knowledge which enables him to draw up plans to be submitted to the client.
- (iii) The builder and contractor. This is generally one person, whose work deals exclusively with quantities and prices of materials, and the time and cost of labour necessary to put them together.

Plans

There are usually two sets of plans:

A. *The Preliminary Plans* consisting of:

- (i) Ground, or floor plans, which show the lay-out of each story of the house.
- (ii) Sections, or plans of the house cut through, as it were, to show its interior.
- (iii) Elevations, or pictures of the flat side of the building, drawn with mathematical accuracy.

At this stage it is possible for the prospective owner to suggest alterations or additions.

B. *Final Plans*

These are much more elaborate and give details as to thickness of walls, damp-resisting provisions, position of fitted cupboards, etc.

In addition to the plans the following documents are prepared:

A. *Specification*. This document is prepared by the architect, describing in detail the material and its preparation and the methods of construction to be employed in the building. When building a small house a specification is not always obtained.

B. *Bill of Quantities*, detailing the amount of brick, stone, timber, slates, etc., required to construct a given house. In the case of a very large building this may be prepared by a quantity surveyor, but for a small house the architect himself may do the work, and thus act in the capacity of a quantity surveyor.

C. *The Estimate.* This is the builder's price for the proposed work. Special factors which affect costs and which require careful consideration when preparing estimates are the nature and accessibility of the site, the freedom for delivery and storage of materials, the supply of labour and of water power, and the time allowed for completion of the contract, etc.

D. *The Contract.* The acceptance of an estimate should be made legal by the execution of a formal contract between the prospective owner and the contractor. These documents usually state the price which the prospective owner undertakes to pay and the builder and contractor to accept, upon satisfactory completion of the work being certified by the architect, who undertakes to supply certain drawings and details, a specification, bill of quantities, and also to supervise the work of building.

Another item in the contract provides for the periodic payment of the contractor as the work proceeds on the issue of certificates by the architect, the amount of payment being usually limited to an agreed percentage of the value of work so certified.

FOUNDATIONS

A foundation is the base, generally artificial, on which any erection is built, and is always made below the level of the ground. It is the most important part of the construction, as on the foundation depends the dryness of the house, the durability, and the stability of the walls. Foundations also prevent the entrance of ground air and ground water into the lower parts of the house.

Materials used

These must be very strong and impervious to moisture, such as:

(a) *Concrete*, which consists of ground brick and stone mixed with cement.

(b) *Cement*.

(c) *Asphalt*, a hard, bituminous substance, black or dark brownish in colour.

(d) *Mortar*. A mixture of lime, sand, and water.

The depth of a foundation varies according to the size and height of the house. It is never less than four to six inches, and always extends at least six inches beyond the outer wall of the house. Foundations may cover the entire area on which the house is to be built, in which case the foundation may form the floor of cellar and kitchens. Alternatively the foundation may be placed underneath the walls only.

WALLS

Exterior Walls give strength and stability to the building; keep the house dry and warm, and protect the occupants and their possessions from climatic conditions. The thickness of the walls depends upon the height and size of the building.

Interior Walls. These are less strong, as they are only partitions in the house. They should, however, be sufficiently thick to be reasonably sound-proof.

Materials used

The materials are chosen not alone for their surface texture, but for their endurance, the final selection being controlled by the family budget.

A. Exterior Walls

- (a) *Bricks.* A brick wall depends for its beauty upon its bonding, its colour, and the character of the joints. 'Bonding' is the term given to the various methods adopted of laying bricks, and the primary object of bonding is to give the greatest possible strength to the structure. The various bondings are recognized by the arrangement they present on the face of the walls. Before 1939 experiments were being made mainly on the continent, with glass bricks, used for exterior walls. They differed in shape from the ordinary brick, being almost a cube; and although not transparent they did allow a large percentage of light to penetrate to the interior of the building. This was particularly useful in corridors, passages, and for the exterior walls of staircases
- (b) *Brick veneer.* This is only occasionally used.
- (c) *Stone.* Even though it is not possible to build a house entirely of stone, its appearance will be greatly improved if some stone can be used.
- (d) *Stone veneer* is also used occasionally.
- (e) *Wood.* This is used in various ways. In old 'black-and-white' or half-timbered houses it appears in the form of large beams and uprights which are left uncovered, or coated with some weather-resistant wash. In small houses of a temporary nature, or in out-buildings, wood boarding is used, and in larger buildings and those of a more permanent character wood shingles are used. These are rectangular in shape, arranged in overlapping form somewhat like a slate roof. Shingles vary in quality and size, and as a wall covering they are practically permanent.

- (f) *Galvanized iron*. Used for temporary houses and for out-buildings. It is extremely noisy during storms, hot in the summer and cold in the winter.
- (g) *Concrete and asphalt*. These can be used for walls, but are generally only used for very large buildings such as institutions.
- (h) *Stucco*. The real base for stucco is a masonry wall. Stucco consists of fine plaster, painted over a pebble-roughened surface.
- (i) *Various substances* peculiar to different parts of the country, such as rammed earth in Dorset, flint and brick in Hampshire, flint in Kent.

B. Interior Walls

These generally consist of brick, the outer surfaces covered with plaster or of wood slats covered with lath and plaster. The best plaster is put on in three coats: the scratch, the brown, and the white. The final coat may be a fine egg-shell finish, an irregular surface, or a sand finish. No better finish than plaster has been found for interior walls, but it has many disadvantages. To put it on is a very wet, messy job, and it introduces moisture into the building at just the wrong time; it delays the building because it stops all other work until the plaster is thoroughly dry. Therefore many types of plaster substitutes are now appearing on the market.

Parts of a Wall

- (i) The wall proper.
- (ii) The footing. This is the spreading out of the lowest part of the wall to give extra stability.

Damp-proof Courses

Owing to the absorbent and porous nature of practically all wall materials, special care has to be taken when building outer walls to prevent ground damp from being absorbed, to prevent damp from being driven in laterally, and to prevent damp from creeping up the wall by means of capillary attraction.

- A. To prevent Ground Damp from being absorbed, and from creeping up the wall by means of capillary attraction.

This can be accomplished by:

- (i) Inserting damp-proof courses in the wall.
- (ii) Building double or cavity walls.

(i) *Damp-proof course*

This is a simple mechanical device inserted in the wall to prevent the penetration of the damp. Materials used:

- (a) Two layers of slate, set in cement. Occasionally one thick layer only is used.

- (b) A layer of asphalt.
- (c) A layer of glazed or vitrified brick.
- (d) A layer of sheet lead. This is only occasionally used because of the expense.
- (e) A layer of cement.
- (f) Patent substances such as rubberoid damp course, which has a fibre base saturated and coated on both sides with rubberoid compound which is proof against water, acids, etc.

(ii) *Double walls*

This type of wall keeps the house dry, renders the rooms reasonably sound-proof, and helps to keep them cool in summer and warm in the winter. The two parts of the wall are tied together at intervals by metal stays or ties, consisting of specially shaped pieces of metal, designed so as to throw off water, thus preventing the metal from rusting.

B. To prevent Lateral Dampness in Walls

- (i) Have large tiles set in cement on the outside walls.
- (ii) Cover the wall with a layer of cement.
- (iii) Tar the wall surface.
- (iv) Prevent the overflowing of gutters by keeping them clean and the guttering in good condition.

ROOFS

A roof encloses the upper parts of a building, and acts as a protection against wind, rain, and snow. In towns and cities fire-resistance is also a necessary property of roofs.

Parts of a Roof

A. The Supports which give the shape, which varies according to the building and the covering material used. A greater pitch is required by some materials than others. In private houses timber framework is used, but in larger buildings steel girders have largely replaced timber for the roof supports. This is due to the rapidity with which steel can be prepared, assembled, and erected.

B. The Covering. There are many different roof covering materials in common use. The nature of the outer covering affects the details of roof construction in many respects. A light covering can be laid upon a much lighter timber framing than would be necessary for a heavy covering.

- (a) *Thatch.* This may be of straw, reed, or heather, according to the locality of the house. It is considered picturesque

but is frequently vermin-infested, and in many districts it is debarred owing to the danger of fire.

- (b) *Slate*. Owing to the low cost, slate has for many years been very generally used for roof covering. It is a strong and impermeable material which can be split into thin plates suitable for laying. The slates are fixed by nailing them to the rafters of the timber framework. The nails used are an important item, and the durability of the work depends on a good selection. They should have large flat heads, and the most satisfactory are those made from a composition of copper and zinc. Iron nails are only used in cheap and temporary work. In modern slate roofs colour effects are often obtained by combining green and purple slate, or fading and unfading slates. Slates are cut to varying sizes, each of which is given a different name, such as Duchess, Countess, etc.
- (c) *Tiles*. This is the most common type of roof covering for the small modern house. Tiles are made from clay, baked in kilns like bricks, and must be prepared with great care in order to obtain a strong, non-porous material. They are obtainable in many colours, some having a beautiful effect when fixed, and many improving with age. Ordinary tiles are made with small projections or nibs at the head by which they may be hung on the roof battens, or rafters, without the use of nails. Other types are made without nibs, and are fixed to the battens either with nails, or by means of small oak pegs. The standard dimensions for tiles are $10\frac{1}{2}$ by $6\frac{1}{2}$ in., usually $\frac{1}{2}$ in. thick, and they weigh about $2\frac{1}{2}$ lb.
- (d) *Wooden shingles*. Owing to the risk of fire, wooden shingles are gradually passing out of use, and in some localities they are actually prohibited. They are made of various hardwoods, which may or may not be treated to make them fire-resistant, and vary in size and colour.
- (e) *Lead*. This is frequently found on roofs for making watertight joints and also for covering ornamental features. It is also used for flat roofs and those of awkward or peculiar shape.
- (f) *Corrugated iron*. Is suitable only for outbuildings or temporary buildings. It is extremely noisy during rain and makes a room very hot in summer and cold in the winter.
- (g) *Zinc*. This can be supplied in flat or corrugated sheets, and is used in the same way as corrugated iron.
- (h) *Copper*. Hardly ever used for private houses, but used on flat, pitched, and domed roofs of municipal and other buildings.

- (i) *Roofing felt.* This is an inexpensive fabric which can be used as a covering material for temporary buildings. It is of animal or vegetable fibre, treated with bituminous preparations to make it weather-resistant.
- (j) *Commercial preparations* made with either an asbestos or a bituminous felt base and made to imitate either shingles, slate, or tiles.
- (k) *Glass.* Used in the form of glass skylights, in the framing and fixing of which great care is necessary to ensure the result being capable of resisting rough weather and remaining firm in high winds.

DOORS

Doors consist of a framework of uprights called 'stiles' and horizontals called 'rails,' with panels of thinner wood placed between them, these panels being held in by grooves or additional mouldings. Modern doors consist of a timber framework covered with sheets of ply-wood, which dispenses with the panel design, and makes the plain flush door which is now becoming so usual.

The doorway is constructed of timber, and consists of two uprights (or jambs) with a lintel across the top. The height and width vary according to the size of the room.

Door Handles. These are made from metal, wood, bakelite, china, and various other substances. The simpler the design the more pleasing the effect, and the easier the handle is to use.

Locks. A lock is a mechanical device for securely fastening a door. It usually includes a sliding bolt which may be moved by a removable key. There are very many different types and varieties.

Hinges. These should be of wrought metal, as cast iron is liable to snap. Certain varieties cause the door to rise slightly to clear a thick carpet, and yet make a close contact with the floor when the door is shut. There are also many varieties of spring hinges designed to automatically shut the door.

Finger Plates. These are made from a variety of materials, such as metal, glass, and china, and are used to protect the painted woodwork immediately above and below the door handle.

WINDOWS

Windows are openings in a wall to admit light and air, and were originally closed by hangings and afterwards by wooden shutters. In the early days of glass manufacture only small pieces of glass

were produced, and these had to be joined together by strips of lead and were used to fill the window openings, which rapidly increased in size with the growing cheapness of glass, which in turn brought an increased desire for light and air.

Types of Windows

- (a) *Casement*. This was the original form of window, and was in use for many centuries. It fell into disuse from the late seventeenth century until the beginning of the twentieth century. It is a type of window which makes ventilation of a room very difficult.
- (b) *Sash windows*. This type superseded the original swing casement. It consists of an upper and lower part, which slide up and down in wooden grooves fixed to the wooden frame. The movement is assisted by weighted pulleys which operate inside the window-frame. This style has many advantages. It is efficient in excluding rain and draughts, and ventilation may easily be regulated. Sash fasteners are fixed at the central meeting rail to prevent them from being opened from the outside, and also to clip the two sashes tightly together. These fasteners should be of a pattern to resist the attack of a knife inserted between the rails. With windows of this style, however, difficulty is experienced in cleaning the external glass without the cleaner assuming a dangerous position on the sill, but there are many excellent devices now on the market which obviate this difficulty. The sash window is a particularly useful style for use in countries where the climate is variable.
- (c) *French windows*. This is an enlarged type of casement window which has become a glazed door which may open either outwards or inwards. With the latter it is difficult to form perfectly watertight joints, but with those opening outwards the trouble does not exist. This style of window makes the ventilation of a room difficult, and it is only suitable for use in warm climates.

NOTE. *Dormer windows*. These may be either casement or sash windows, the name being given to those windows which are placed high up on the roof—the term ‘dormer’ arose from the windows being those of sleeping rooms.

Bay windows. These may also be either casement or sash windows, which form a small recess and thus give extra space to a room.

Parts of a Window

- (i) *The framework.* This was originally made of iron, which was ousted by wood, which is now being superseded by metal. The latter is becoming more and more usual, owing to the decrease in cost as a result of the economies of large-scale manufacture.
- (ii) *The glass.* This should be as good as possible to prevent distortion. See pages 144, 148.
Perspex. See page 151.

CHIMNEYS

Correct chimney construction is absolutely essential for economical home heating. The ideal chimney interior should be a rounded smooth surface. The size and height depend on the fuel to be used and the size of the house. The top of the chimney should be two feet at least above the top ridge of a peaked roof.

CEILINGS

This is usually the underside of the floor of the room above, the floor beams being sandwiched between the floor boards of the upper room and the lath and plaster forming the ceiling of the room below. The ceiling of rooms at the top of the house is often partially the under surface of the roof when there is no attic.

EXTERIOR

A. **The Formal Type**—found in parts of London, Bath, etc. The windows and doors are well-proportioned and the house usually has a basement kitchen.

B. **The Informal Type.** This is much more frequently built, as it is easier to plan, decorate, furnish, and run.

C. **The Picturesque**, with thatched roof, latticed windows, crazy paving, etc.

D. **The Period.** Half-timbered, Georgian, Queen Anne, etc.

E. **The Modern**, with flat roof, very large windows, etc.

NOTES

HOUSE CONSTRUCTION • NOTES

CHAPTER XXIII

THE HOUSEWIFE'S WORKSHOP: THE KITCHEN— ITS PLANNING AND EQUIPMENT

THE importance and necessity for the careful planning of the home workshop cannot be over-estimated, and it is deplorable to realize that there still exist large numbers of kitchens which are extremely badly planned and equipped, consequently the important work which has to be carried out in them is nearly always badly organized.

Planning the Kitchen in Relation to the Rest of the House

In a house which is to be run entirely by the housewife or by the housewife with the assistance of paid labour for two to three hours weekly, the kitchen is purely a workshop.

If there is a resident maid—or maids—the ideal arrangement is to have a small kitchen (or workshop) with the addition of a small, but entirely separate, sitting-room for the maids. If this cannot be managed, then the working centres should be concentrated in one part of the room whilst the remaining side or corner can be fitted, furnished, and used for leisure. Whichever scheme is adopted, the kitchen must be conveniently placed in relation to the dining-room, the front hall, and the back door.

Aspect

The old idea of excluding all sun from the kitchen is becoming obsolete due to the great improvement in the design of cookers which accomplish the work of cooking food without overheating the room. With gas and electricity only that fuel required for the actual cooking of the meal is used.

Size

Too large a room is time-wasting and work-making. Too small a room can be equally tiring, but in a different way, nervous energy being needlessly expended due to the irritation set up by cramped surroundings. In a flat in the U.S.A. a space of 6 ft. 4 in. by 4 ft. 2 in. was converted into a completely equipped kitchen by careful planning, and by the utilization of every piece of wall space. This kitchenette provided ample space in which one person could work efficiently and easily, and meals could be prepared for two or three persons. A space of 8 ft. by 10 ft. is amply large enough for a single worker to work easily and efficiently, producing meals for

a larger number of people. A larger space—8 ft. by 13 ft.—which could be worked by one person would also allow two workers using it without undue inconvenience.

Shape

Kitchens may be:

- (a) *Square*. This is a very usual shape, but experiment has shown that such a shape adds to the fatigue of the work done in it.
- (b) *Oblong*. The narrow oblong shape, or 'dead end' type is very convenient for one worker, and saves much time and energy.
- (c) *Passage-shaped*, i.e. with a door at either end, or on the side walls opposite to one another. This type is not good, as people passing through bring in dirt and get in the way of the work. Passage ways should be provided outside the kitchen from the rest of the house to the back door.

SURFACES

A. **Walls**. The most important points to consider when choosing wall surfaces are:

- (i) Ease of cleaning.
- (ii) Ability to withstand moisture.

Suitable Wall Finishes

- (a) *Porcelain tiles*. These are ideal because of their smooth, easily cleaned surface and are specially useful if placed behind the working units, such as cooker, sink, etc. They should be taken to a height of 3 ft. to 5 ft. from the ground. Owing to their cost it is not always possible to have them in a kitchen.
- (b) *Good enamel paint*. This stands much wear and tear. The egg-shell finish is more attractive than the highly glossy finish.
- (c) *Good oil paint*. This has the same advantages as enamel.
- (d) *Plastic paints*. These are becoming increasingly popular, particularly with the home decorator.
- (e) *Linoleum*. Used as a dado round the lower part of the wall to a height of 3 ft. to 5 ft. above the floor. The upper part of the wall can be finished with enamel, paint, or distemper.

NOTE. Linoleum for wall coverings is now made in a lighter grade than that used for floor covering. It is durable and very reasonable in price. It is fixed to the walls by means of specially strong adhesives, and the edge is finished

Ha-Ha-Ha - how fool are you
(fool girl) why should I tell you
ok - By By

with a wood moulding or flat fillet, which can be painted to match, or in a contrasting colour.

(e) *Washable distemper.*

B. Woodwork. Parts of the room such as the door, door-frame, window-frame, skirting board, etc., should all be made as plainly as possible to eliminate ledges which are dust-traps and work-making. Panel doors should be avoided and a plain 'flush' door used instead.

Suitable Finishes for Woodwork

(a) *Paint.*

(b) *Enamel.* This gives a harder, smoother finish than paint.

C. Floors. The perfect flooring of an inexpensive substance which is durable, comfortable to stand on, easy to clean, warm, resilient, non-slippery, and non-receptive of grease has not yet been invented.

Suitable Floorings

(a) *Tiles.*

(b) *Composition.*

(c) *Linoleum* laid on the wood floor boards.

(See pages 94, 95, 84.)
These are fairly satisfactory but all have disadvantages.

(d) *Linoleum*, with the addition of tiles under and round the sink and cooker, provides the most satisfactory arrangement for a middle-class type of kitchen.

D. Ceilings. These should be light in colour because of the reflective quality of light colours.

VENTILATION

The question of ventilation should be given careful consideration, remembering that cross ventilation will enable the kitchen to be most easily and thoroughly aired. Two windows on adjoining walls, or on opposite walls are ideal. Avoid placing windows and doors in such a position that cooking odours will be drawn into the dining-room or the remainder of the house.

LIGHTING

A kitchen should have good natural and artificial lighting. The windows and the fixtures for artificial lights should be so placed as to illuminate adequately the three working centres:

(a) The work table.

(b) The cooker.

(c) The sink.

How much light, how many fixtures, and what wattage lamps are necessary depends upon the size and shape of the room and upon the colour of its walls and ceiling. Light walls and ceiling reflect more light than do darker ones, and are to be preferred. If darker tones have been used in decorating the kitchen a greater amount of light, both natural and artificial, will be needed to secure adequate illumination throughout the room.

The worker should never have to stand in her own shadow at any work centre. It should be possible to work in every part of the room, and to see easily into the oven and into the refrigerator at any time of the day, and in any weather. Ceiling lights are used for general illumination. They should be built-in fixtures to avoid shadows. A light dropped too low from the ceiling will result in the worker's body casting a shadow over the work, except when she stands directly under the light.

A. *An indirect centre fixture* containing a 150-watt lamp is suitable for a small room (8 ft. by 10 ft.), and would provide ample illumination, even and practically shadowless, throughout the room. In this case the ceiling must be very light in colour, preferably white, to reflect the maximum amount of light.

B. *A direct centre fixture* using a 100-watt bulb and supplemented by additional lights over the sink, cooker, and kitchen cabinet, would be equally suitable in the same-sized room.

C. *In corners, at sinks, tables, or cookers* which do not receive unobstructed light from the central ceiling fixture, supplementary lights may have to be used. These may be additional ceiling lights or side lights, placed directly over, or at each side of the surface they are to illuminate.

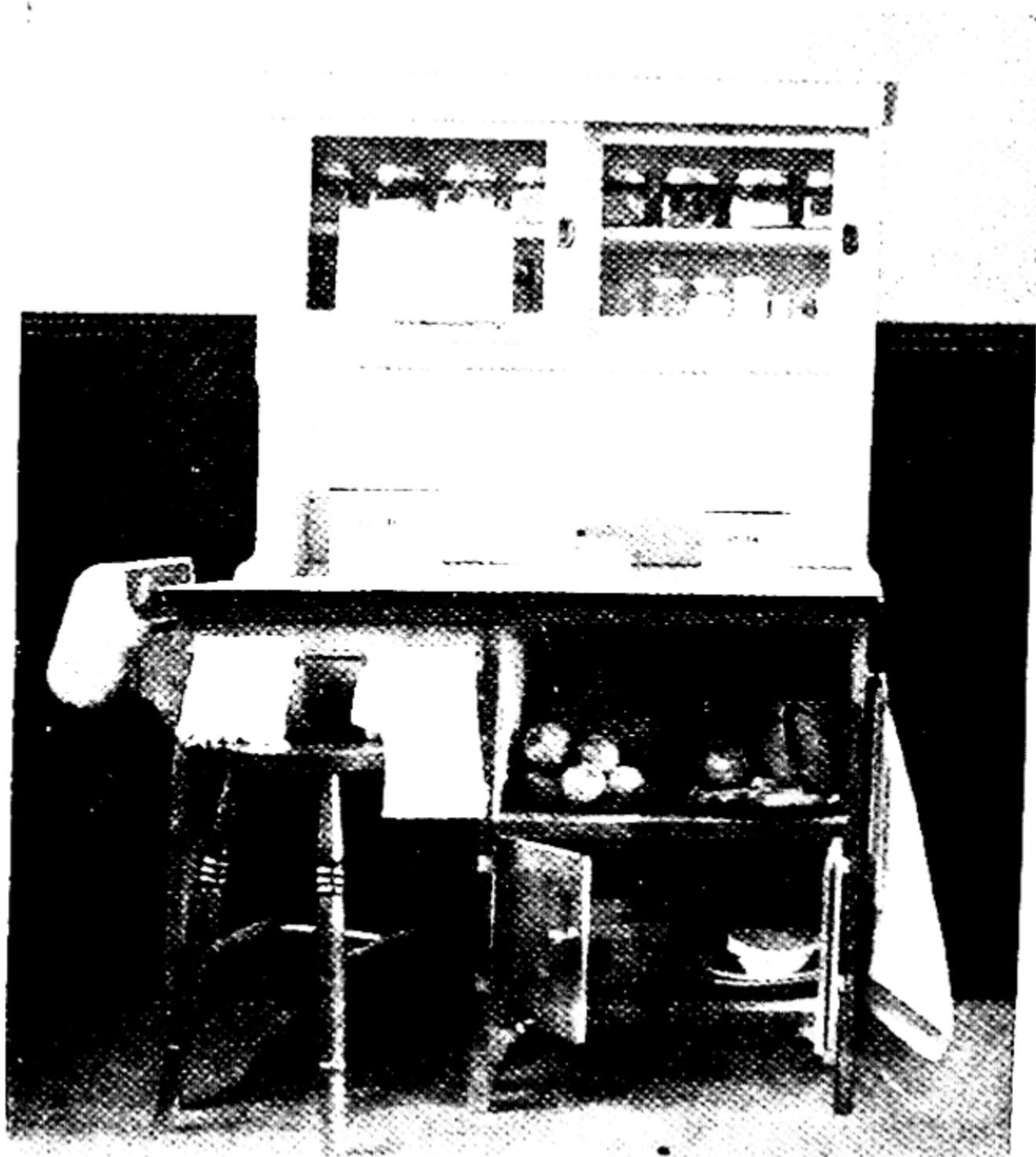
EQUIPMENT

A. Large Fixed Equipment

- (i) *The sink.* See page 243. For a medium-sized house the average dimensions of a good sink would be 24 by 18 by 10 in. depth, and the distance from the floor to the base of the sink should be about 27 in. The taps should be about 15 to 18 in. above the base of the sink and should be about 6 in. from one end of the sink. This prevents the chipping of china and facilitates the filling of buckets, which in the past was impeded by the centrally fixed taps. The hot and cold water supply pipes should be sufficiently far apart (at least 3 in.) to allow of cleaning.

- (ii) *Draining-boards*. There should be two boards, one on either side of the sink. Each should be grooved and raised slightly away from the sink, to facilitate the draining away of water. A slightly raised frontage prevents crockery from slipping off. One board should be hinged, to allow a copper to be placed underneath if required. The boards should project about 1 in. over the sink and be about $1\frac{1}{2}$ in. clear above the edge and not be supported by the end of the sink. Draining-boards can be made from a variety of materials, and should be as wide as the sink and as long as possible.
- (iii) *Cooker*. See Chapter IV. If slot-meters are used they should be easily accessible and placed near the stove.
- (iv) *Refrigerator*. In small modern houses and many flats a refrigerator is now taking the place of a larder. This is due to:
 - (a) The present perfect form of food distribution, i.e. bread, milk, groceries, etc., which make it almost unnecessary for any housewife to store food for more than thirty-six hours.
 - (b) Economy of space and building material.
 - (c) Necessity for making the kitchen premises as compact as possible.A refrigerator should be of good quality, made by a reliable manufacturer, and it should be of adequate size.
- (v) *Kitchen cabinet*. These can be bought in many different sizes, forms, and qualities. If a proper kitchen cabinet cannot be afforded a small work table placed against a wall on which can be hung a cupboard to hold all the dry stores will act as a substitute for the more expensive cabinet. Whichever plan is adopted, the working space should be about 36 in. by 18 in. The containers for dry goods can be:
 - (a) Bought with the cabinet, in which case the shelves are made to take the containers and no space is wasted.
 - (b) Bought separately. In this case they may not fit the shelves exactly.
 - (c) Improvised from tins, jam jars, etc. These should be carefully labelled.
- (vi) *Cupboards*. Whenever funds permit a modern kitchen should have at least two built-in cupboards: one for dry stores, cleaning stores, cloths, etc., and the other for china, glass, silver, cutlery. The cupboards should reach to the ceiling to eliminate the dust trap on the cupboard top, and part of the cupboards can take the form of one or two drawers. The cupboard doors should be so arranged that when opened

they do not block out the light. The highest shelves should be used for the storage of such things as are not constantly required, such as jam, etc. Each cupboard should be fitted with two doors, one closing the upper half, storing such things as are only used occasionally, and one closing the lower half.



PHOTOGRAPH BY HUGH WALWIN, GLOUCESTER, REPRODUCED BY KIND PERMISSION OF THE PRINCIPAL OF THE TRAINING COLLEGE

KITCHEN CABINET

Designed by the Staff of the Gloucestershire Training College of Domestic Science.

(viii) *Shelves.* Whether these are enclosed or open thought must be given to:

- (a) *The distance from the floor.* No shelf to hold frequently-used goods should be more than 5 ft. above floor level.
- (b) *The distance between one shelf and the next.* A good distance is about 10 in., a 7 lb. jam jar being 7 in. to 7½ in. in height.

One or two shelves at 15 in. apart may be useful for storing packet goods. Adjustable shelves are useful and are sometimes found in the more expensive type of kitchen cabinet.

- (c) *The width of shelves.* These should vary according to the goods to be stored. For small things such as flavourings, baking powder, salt, etc., a narrow shelf should be used, otherwise the goods get pushed to the back of the shelf, are out of sight, fall down, and get lost.

NOTE. The proper equipment of shelves and cupboards, as well as the correct placing of apparatus, reduces work more effectively than expensive fittings and cabinets.

- (viii) *Cleaning cupboard, or housemaid's cupboard.* In many kitchens space is made to include a cupboard in which is stored all the brooms, brushes, and cleaning equipment required in the house. This is not altogether ideal, the better plan being to arrange to have the cupboard on some landing.

A cleaning cupboard should

- (a) Be large enough to contain everything, including the vacuum cleaner and its attachments.
 - (b) Have a shelf on which bottles, soaps, etc., can be stored.
 - (c) Have hooks and a rail on the inner side of the door to hold small equipment, such as kneeling mats, dusters, etc.
- (ix) *Plate rack.* This should be fixed to the wall immediately above a draining-board. It should be fitted with a detachable tray on to which the plates and dishes can drip.
- (x) *Ironing unit.* There may or may not be sufficient space in the kitchen for this piece of equipment. One commercial firm incorporates this unit in the front panel of the door of the cleaning cupboard.

B. Small Equipment and Apparatus

- (i) *Small articles* which are used together should be grouped together, i.e. kitchen knives, mixing spoons, wooden spoons should all be in a drawer of the kitchen cabinet.
- (ii) *Articles which are most often used* should be kept in the most convenient places.
- (iii) *Clock.* This should be simple in design, and large enough and clear enough to be easily seen. It should not be placed in a draught or on a shelf or ledge over a cooker.
- (iv) *Rubbish pail.* This should be made of good enamelled tin with a pedal opener. It is very often fitted with a wire basket, which can be lifted out, and the rubbish subsequently

thrown away or burnt. Lining the pail with several sheets of newspaper keeps the pail clean and the rubbish can be wrapped up neatly and disposed of quickly.

- (v) *A gas or electric point* near the work table at waist height is useful for heating an iron if an ironing unit cannot be included.
- (vi) *A trolley*, for moving dishes, etc., to and from the dining-room, is very useful. A heavily laden trolley can be moved much more easily than a heavily laden tray. A trolley also provides additional table space in the kitchen and can take the place of one draining-board.
- (vii) *A kitchen stool*, or stool-chair, is a very necessary adjunct to the kitchen equipment, enabling the worker to rest or to sit down whilst doing many jobs.

Planning the Room

The major pieces of equipment must be arranged in a certain definite order with the smaller items, and utensils, grouped around the larger pieces. The best arrangement of equipment in a kitchen for one worker is in the form of a hollow square about 8 ft. by 10 ft. This is quite large enough to contain all necessary modern equipment and to provide ample working space for one person, yet eliminates unnecessary walking.

As the result of much experiment the following is considered to be the ideal arrangement of apparatus: sink, with cooker, cabinet, and refrigerator on the left hand of the sink in that sequence. According to the position of doors and windows it may be necessary to place cooker, cabinet, and refrigerator on the right-hand side of the sink. The kitchen cabinet and refrigerator are used together more than any other two pieces of equipment, and the most convenient place for the refrigerator is on the left of the cabinet. The sink and cabinet, and the cooker and cabinet, are used together about equally.

Colour Schemes

Plan out the colour scheme for a kitchen just as carefully as the colour scheme for any other room. Colour in the kitchen is of great importance and present-day kitchens make generous use of colour, which transforms them from cold hospital-like affairs to really attractive rooms, where the worker finds satisfaction in the colour and cheerfulness of her surroundings as well as in the efficiency of her modern equipment.

The main masses of colour, i.e. the walls, etc., should be neutral

in shade, brilliant colours should be used only sparingly, as in the curtains and in other small areas. Neutral colours furnish a background of which the worker will not grow tired.

Shelf coverings and the small items of equipment in bright colour will give that splash of brilliance which gives character to a room. These lesser items can be changed with comparatively little expense when the kitchen requires freshening up.

Colour will give satisfaction in making the home workshop a place of beauty as well as of efficiency.

WORKSHOP: KITCHEN-PLANNING AND EQUIPMENT

NOTES

CHAPTER XXIV

FUELS USED AND METHODS OF HEATING A HOUSE

ONE of the primitive instincts in man was a desire for warmth, and that instinct still survives.

Heat may be distributed in three ways:

1. Conduction

Heat spreads from one part of an article to another, as can be proved by heating one end of an iron poker, or stirring a cup of hot tea with a solid silver teaspoon. This method of heat distribution is not of much importance in heating a house.

2. Convection

The property which heat possesses of warming the air as the air passes over some heated object. The air when warmed rises and more cold air comes in to take its place, and this in turn when warmed will rise. A person in such a room would become warm also, but gradually, as the circulating air becomes warm. As the air becomes warmer it tends to absorb moisture from any available source, this absorption becoming the more intense as the heat becomes greater, so that a room heated by very hot air will make the occupant feel parched and dry unless means are taken to prevent this.

3. Radiation

Distribution of heat in the form of rays given directly to the different objects which come into the line of these rays. Thus the sun warms our bodies, but leaves the air cool for us to breathe. A fire warms a person but leaves the air of the room cool. This method seems to be the most healthy, but convection heating has a very definite function to perform in modern homes, and should not be forgotten merely on account of the fact that if over used it is unpleasant. The ideal is to have an all-over general warmth produced by means of convection with centres of radiant heat in rooms and places where special heat is most necessary.

Buying Fuels

The Mines Department announced in 1941 that to facilitate the distribution of household fuels to the domestic consumer it has been decided, in agreement with the coal distributive trade, to simplify the present methods of ordering these fuels. In future they will be supplied only in the following classes:

A. Ordinary Coal

- (i) Best selected coal; (ii) house coal; (iii) kitchen coal.

B. Other Fuel

(i) Domestic boiler fuel (including coke); (ii) anthracite stove fuel; (iii) low temperature fuel.

FUELS

A. Coal

This is a form of mineralized vegetation and consists of the remains of plants which flourished in the carboniferous era and which have been changed by the action of heat and pressure. A good coal is one which shows a bright, smooth surface, and one of the best is that from Staffordshire.

The cost of coal varies very considerably, according to: (a) The quantity bought. (b) The quality of the coal. (c) The time of the year. Coal is cheapest to buy during the summer. (d) Distance from the coal-fields.

B. Coke

This is produced in large quantities during the manufacture of coal gas. It is slightly more difficult to light than coal and requires an extra draught to make it burn. It is light in weight and therefore bulky to store. The cost varies, but it is always cheaper than coal.

C. Anthracite

This is a special type of coal which burns with a short hot flame and produces little or no smoke or ash. The best comes from South Wales and contains a high percentage of carbon. The great disadvantage of anthracite is its high cost and the fact that it is not always easy to procure. It can only be burnt in closed stoves as it produces unpleasant-smelling fumes. It burns very slowly and requires very little stoking.

D. Smokeless Fuels

The foundation of all smokeless fuels is ordinary bituminous coal which has been treated to remove the smoke-producing constituents, leaving a fuel which produces heat but no smoke or soot. Because of this the atmosphere is kept cleaner, chimneys do not require cleaning, interior decoration is not so frequent, and daily dusting is minimized. Owing to the porous nature of the fuel a neglected fire is very quickly restored, but at the same time the fuel burns away quickly, thus making constant attention to the fire necessary. For this reason it is not suitable for burning in a kitchen range.

Smokeless fuels are expensive and not always easily obtained, especially in the country and in small towns, and although costly, the

fuel is light in weight so that a small quantity goes a long way. Some can be obtained in brown paper cartons containing 28 lb., and this forms a clean and very convenient method of storing fuel, particularly suitable for flats.

E. Cinders

These are left in a grate after the fire has burnt out. They consist of ordinary coal with certain of its combustible substances burnt away, leaving a semi-porous shell. Cinders should never be wasted but used upon a fire, and, being partially porous, they are useful for helping to light fires.

F. Peat or Turf

This consists of compressed, decayed vegetable matter similar in origin to coal, but not changed to the same degree. Peat is formed in bogs and marshy places. It burns with a good heat, but a disadvantage is that it produces a quantity of fine white ash and dust. It has a characteristic smell.

G. Wood

Ash, beech, oak, cherry, and apple logs all burn well, but are not always easy to obtain in a town. It is sometimes possible to buy tarred road wood-blocks, which burn excellently and give great heat.

H. Charcoal

The basis of charcoal is wood, heated out of contact with air until a blackened substance is produced. It is not used in Great Britain for heating purposes and only occasionally for cooking, i.e. for grilling. It is extensively used for heating in France, Spain, Italy, etc.

I. Fuel Blocks, or Briquettes (or Brickettes)

These consist of coal dust mixed together with sawdust, cement, fire-clay, and pitch, which latter substance is a by-product of tar. The blocks are shaped, allowed to dry and harden. They burn very slowly and should always be used in conjunction with ordinary coal. They are useful for keeping-in a fire.

J. Coal Gas

This is produced from bituminous coal. The cost varies in different towns.

K. Bottled or Cylinder Gas

This is the latest form of portable fuel, and is a substitute for coal gas which enables the country dweller to be entirely independent of a town supply. It consists essentially of a compound (or compounds) of carbon and hydrogen and is supplied in liquid form in steel

cylinders. It has a high calorific or heat-giving value of over 3,000 B.Th.U. per cubic foot, compared with the 500 B.Th.U. per cubic foot of ordinary coal gas.

Two cylinders are joined by a mechanical device, a pressure regulator, which shows when the second cylinder is switched on. This indicates that a fresh supply must be ordered. Thus the possibility of running out of gas is obviated. The gas is stored in liquid form, each of the standard-sized cylinders containing 190 cubic feet of gas. It can be used for gas fires, refrigerators, wash-boilers, laundry irons, as well as cooking and lighting.

Sizes of Cylinders

There are two sizes:

A. Standard size, 83 lb.

B. Small size which is specially useful for flats, caravans, yachts, etc, 32 lb.

Cost of using Calor Gas

- (i) At present it is somewhat expensive, but it is hoped that with an increased demand for a portable fuel the costs will decrease.
- (ii) *Installation costs* vary according to the amount of labour involved.
- (iii) Additional gas equipment, such as cookers, fires, etc., may have to be bought.

Calor Gas can be used for all purposes, i.e. for cooking, space or water heating, lighting, refrigeration, and for ironing.

Consumption

- (i) One cylinder (Standard) contains enough gas to supply the requirements of an ordinary family for several weeks.
- (ii) A small boiling ring consumes 1.75 cub. ft. per hour.
- (iii) A large boiling ring consumes 2.5 cub. ft. per hour.
- (iv) A grill ring consumes 3.0 cub. ft. per hour.
- (v) An oven consumes from 2.0 to 3.75 cub. ft. per hour.

Advantages of Calor Gas

- (i) As for ordinary gas.
- (ii) Cylinders are brought by motor lorry to the consumer's house.
- (iii) The user does not have to remove the cylinders or make any connections whatever.

Disadvantages

- (i) As for ordinary gas.
- (ii) It is expensive, but it is hoped that in time it will become cheaper.

L. Oil

Liquid fuels are obtained from various parts of the world and are supposed to be of organic origin, derived from the remains of animals and plants. They are an inexpensive form of fuel.

M. Power, i.e. Electricity

This is the ideal fuel for heating purposes. It is simple to use and is very clean, no products of combustion being produced. Electric fires are portable.

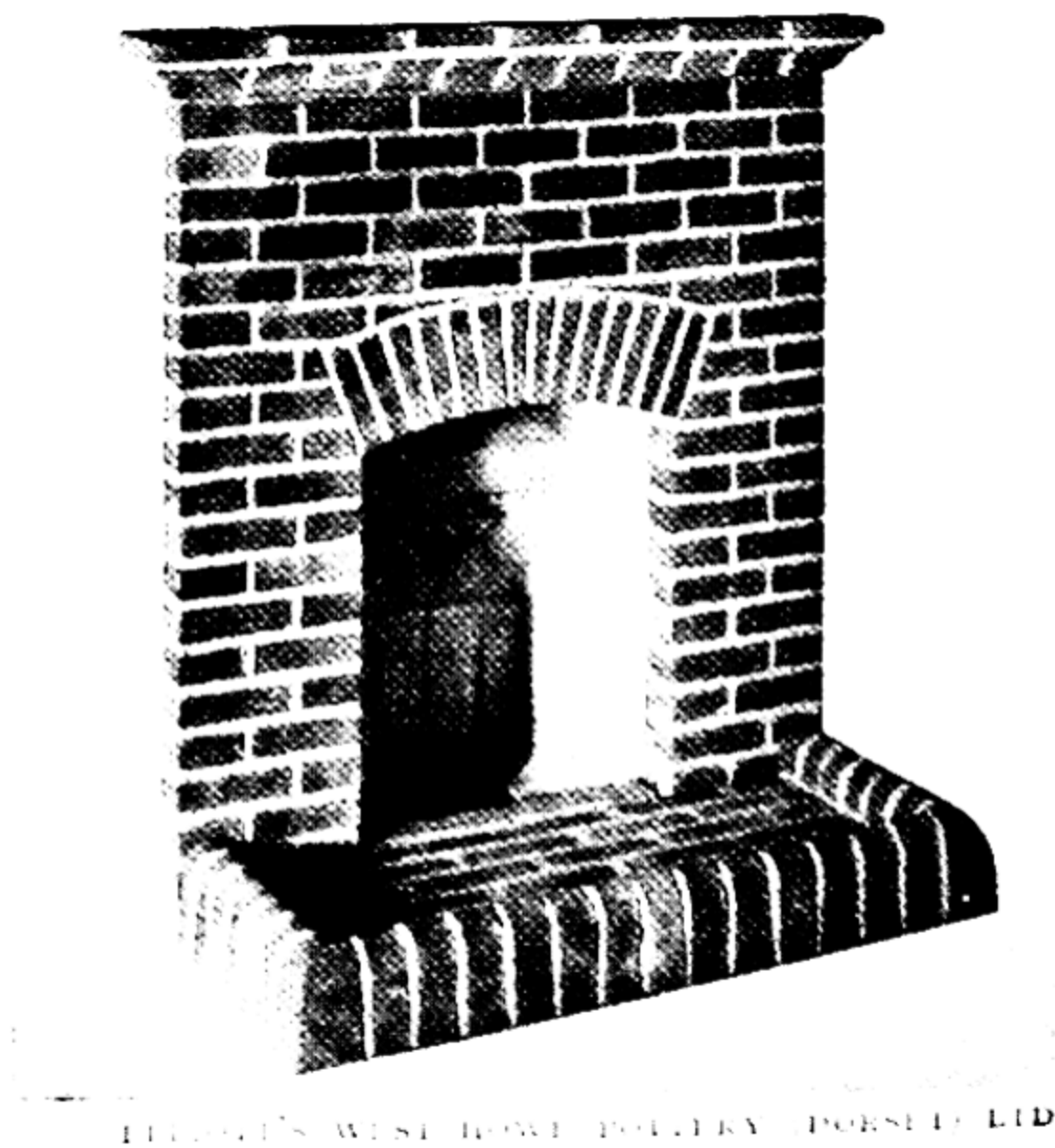
The amount of heating required by a house is affected by:

- (i) Climate, variable weather and high winds.
- (ii) Size of building.
- (iii) Type of building and construction.
- (iv) Position of building with reference to hills, belts of trees, etc.

METHODS OF HEATING A HOUSE

A. By means of Open Coal Fires*Advantages*

- (i) Cheerful and pleasant.
- (ii) Assists the ventilation of the room.
- (iii) Does not dry the air of the room.

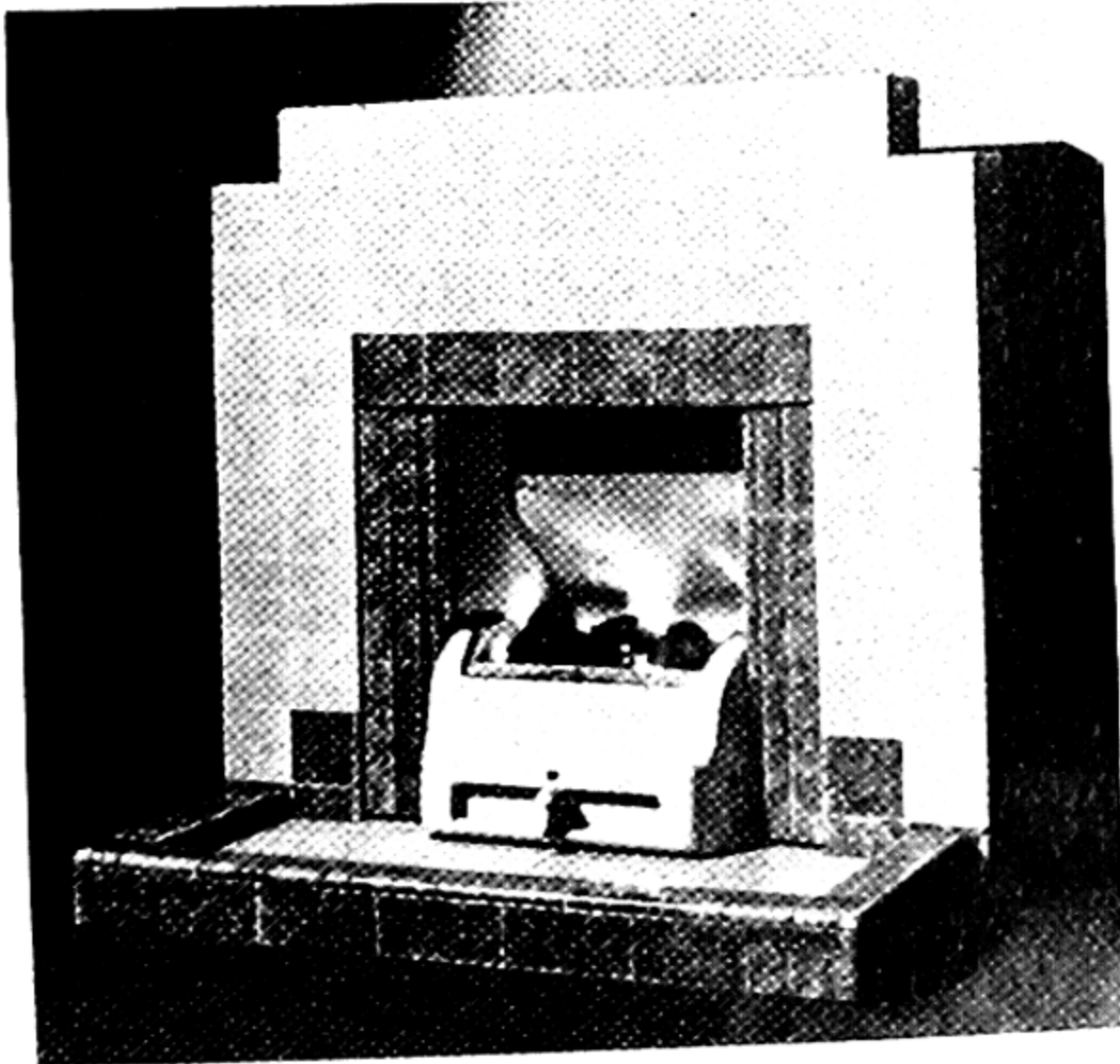


FRIDGES' WEST HAVEN POTTERY, DORSET, LTD

A MODERN COAL FIRE-PLACE

Disadvantages

- (i) May be expensive, owing to the escape of the heat up the chimney. It has been calculated that with old-fashioned, badly constructed chimneys, about seven-eighths of the heat produced during combustion is lost up the chimney.
- (ii) The room is heated unequally.
- (iii) The grate and hearth require daily attention in clearing the dead fire, cleaning the fire-place, and relaying and lighting the fire.
- (iv) The fire requires constant attention during the time it is burning.
- (v) Heavy coal buckets have to be carried about the house.



THE SOFONO ORIGINAL (DROP FRONT OR LO-FRONT) FIRE
Manufactured by Grange-Camelon Iron Company Ltd, Falkirk

Construction of a good Fire-place

This should be such as to produce:

- (a) The maximum amount of heat with
- (b) The minimum amount of fuel.

Modern fire-places are constructed with the minimum amount of metal (which hinders radiation by absorbing the heat) and the maximum amount of fire-clay which radiates heat.

- (i) The chimney opening should be narrow.

- (ii) The back must slope in towards the room and should be one-third the width of the front of the grate.
- (iii) The well should be so arranged that cinders cannot fall through and that the coal whilst burning automatically topples into the centre, so that poking the fire is not necessary.
- (iv) The slits in the well should be narrow.
- (v) The space under the well should be small and should be filled with a movable ash-pan.
- (vi) The surround should be made of tiles or brick. Both are easy to clean, artistic in colouring, and do not absorb heat.
- (vii) Ventilation must be supplied to the well of the fire-place, and this is generally arranged:
 - (a) By means of ventilating slits in the front of the ash-pan.
 - (b) By ventilating bricks placed at the sides of the raised tiled hearth.
- (viii) Gas ignition burner simplifies lighting.
- (ix) The fire-place may be designed with or without a back boiler installation.

Position of Fire-place in a Room

- (i) It must be sheltered from draughts.
- (ii) There should be sufficient wall space on either side to enable people to sit on either side of the fire.
- (iii) It should be as far from the door as possible.
- (iv) It should not be on the same wall as the chief windows.
- (v) The flues should be concentrated on the inner walls—this helps to warm the house and the chimneys are less liable to smoke. The fire-place, however, very often has to be on an outside wall, but heat is lost if placed in this position.

B. By means of Gas Fires

Advantages

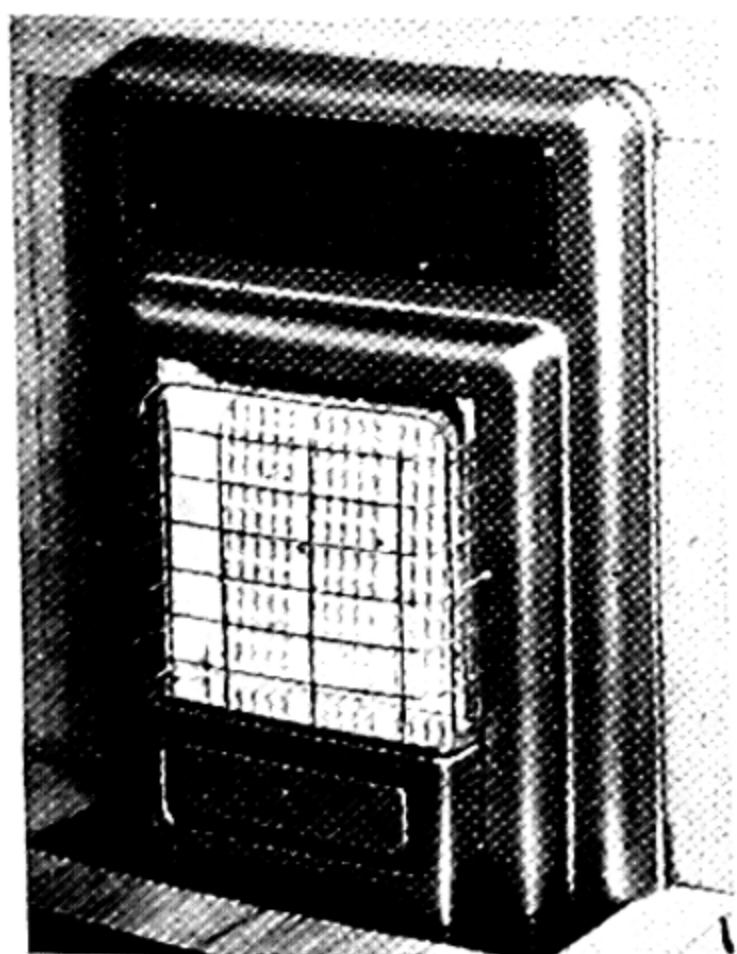
- (i) Clean.
- (ii) Convenient.
- (iii) Noiseless.
- (iv) Non-injurious to health.
- (v) Good for a room which may be used only occasionally or for short periods of time.
- (vi) Easily managed and regulated.
- (vii) Modern gas fires give out a very large percentage of their heat in radiant form.
- (viii) They help with ventilation.
- (ix) They can be hired.

Disadvantages

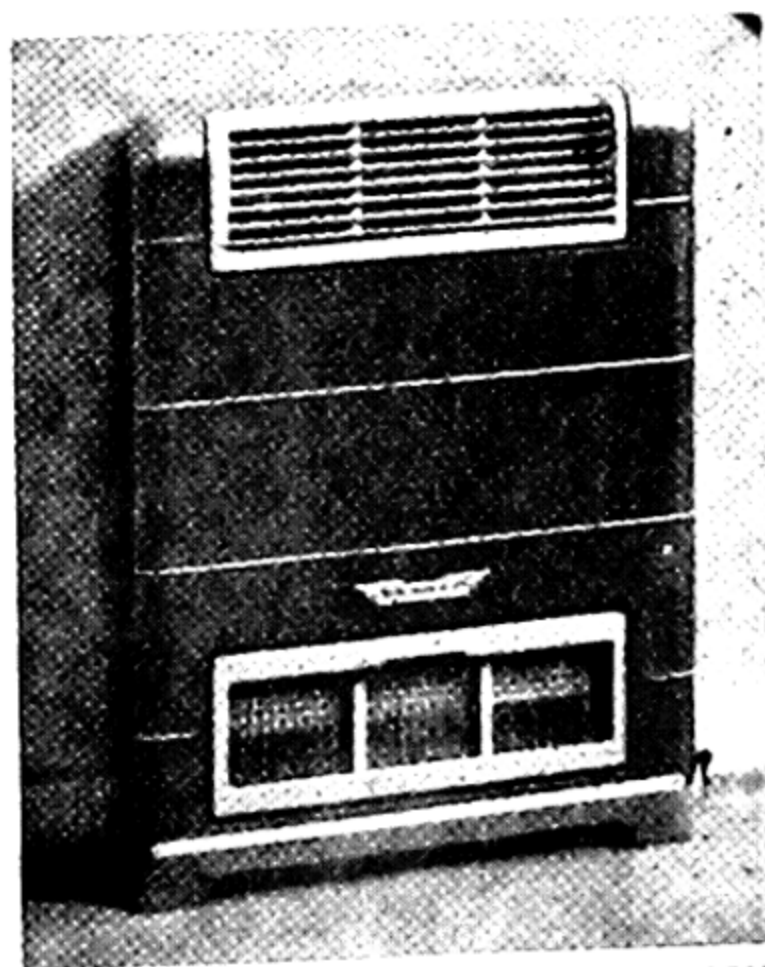
- (i) Expensive if used continuously, although favourable tariffs are now available in some districts.
- (ii) Need to be of reliable manufacture and properly installed by a competent gas-fitter to ensure satisfactory operation.

Construction of a Gas Fire

- (i) A single row of burners, varying in number.
- (ii) The flame from each burner is enclosed in an upright radiant of fire clay which becomes incandescent and so radiates heat.
- (iii) The radiants rest on a fire-brick back which varies in shape.
- (iv) The front of the fire is so shaped that as much of the heat is radiated into the room as is possible.



THE GAS COUNCIL



THE GAS COUNCIL

GAS FIRES

The fire on the right is of the wall-panel type.

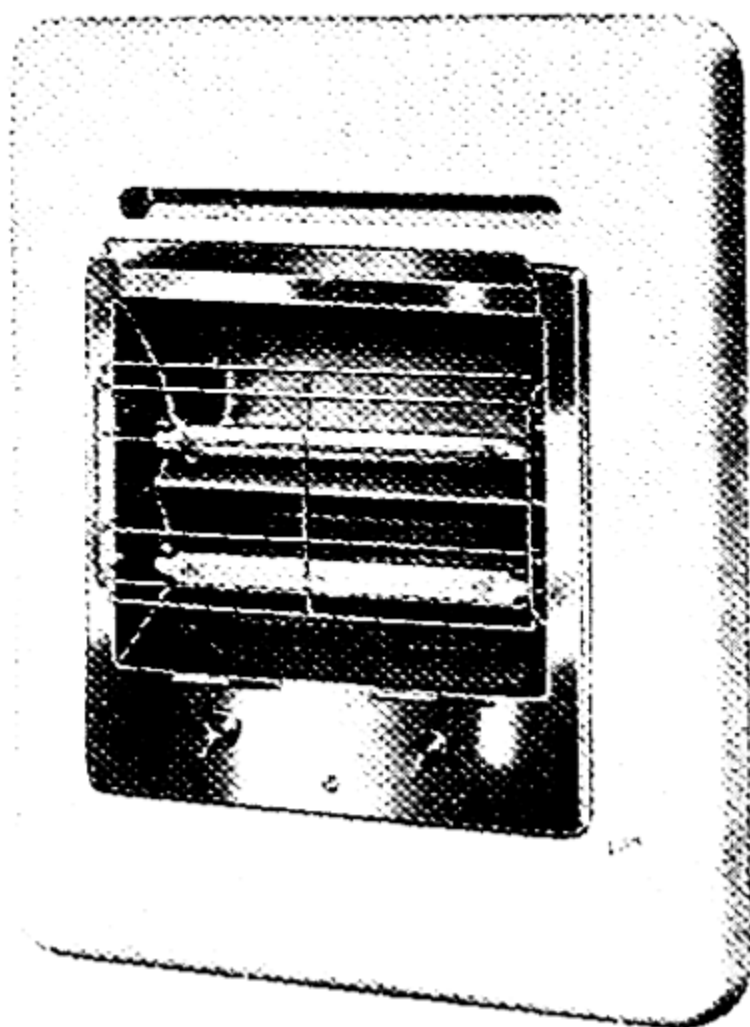
- (v) The products of combustion all pass under the canopy or frame and none enter the room. The stale air from the room is also drawn into the chimney, producing a steady and healthy ventilation.
- (vi) Modern gas fires are silent, due to improved designs of burners and controls to regulate the mixing of the gas and air.
- (vii) Gas fires should be connected to a chimney except in the case of the small portable type which can be used 'fluelessly.'

Gas fires may be obtained which are specially designed to imitate coal or log fires in appearance. These imitations are efficient but do not usually produce the same amount of heat as the ordinary gas fire. In the most recent gas fires the separate columnar radiants are being replaced by a continuous incandescent combustion chamber bounded on the back by the firebrick and at the front by a flat openwork of fireclay, while the use of luminous flames ensures complete silence.

C. By means of Electric Fires

Advantages

- (i) Clean. No products of combustion, therefore no flues required.
- (ii) Very healthy.
- (iii) Easy to use.



ELECTRICAL DEVELOPMENT ASSOC.

OPEN-BAR ELECTRIC FIRE

Wall inset type

- (iv) Portable, and not very heavy. The same fire can be used in different rooms, provided there is a power plug to which it can be attached. The fire can also be moved to different parts of the room according to the length of the flex.
- (v) The heat is distributed almost entirely by radiation and only to a small extent by convection.
- (vi) Can be hired.

Disadvantages

- (i) Expensive.
- (ii) Unless used at the base of a chimney, do not promote ventilation.

Construction

There are two main classes of electric fires: (a) the open-bar type; (b) the reflector type.

(a) *The open-bar type.* In this the element is made of coiled nichrome wire, mounted on a grooved fire-clay support, which gradually rises in temperature during the heating and acts as a powerful radiant to supplement the work of the element. The unit is usually mounted on a metal frame, with allowances for good air passage behind, so that warming currents are set up from the back of the fire-clay and a proportion of convected heat is utilized in room warming. There has been a greater tendency for installing 'fitted' fires set into the wall, and when this is carried out there should be good back ventilation to give air passage round the fire-clay mounting. This averts excessive wall heating and promotes a proportionate warming by convection and consequent air change.

(b) *The reflector type.* This has become very general in recent years, as it gives out powerful heating by the use of highly polished metal reflectors. The most usual type consists of a tubular-shaped fire-clay mount, finely wound with nichrome wire, so that the heat is radiated evenly from the glowing 'rod.' Skilful screening from the back with a highly polished metal trough causes the back rays to be concentratedly re-directed into the room. The high polish ensures that no heat is absorbed by the metal, so that all the heat is emitted in a highly radiant form. Lighting is also incorporated into fire units to amplify the glowing effect, sometimes to give a simulated 'ember' appearance.

D. By means of Oil Stoves

Oil is less used than gas or coal for heating purposes, but is nevertheless a very useful form of fuel. Modern oil heaters produce a blue or non-luminous flame as the result of air combining with the paraffin, and this blue flame produces a more intense heat than the yellow or luminous flame.

Advantages

- (i) The fuel is inexpensive.
- (ii) The initial cost of the stove is not great.

- (iii) The stove is portable, not very heavy, about 12 lb., and can easily be carried from one room to another.
- (iv) The amount of fuel used is very reasonable, 1 gallon of oil burning for about 16 hours.

Disadvantages

- (i) Unless carefully looked after and cleaned daily the stove is liable to smell.
- (ii) The oil reservoir must be refilled daily.
- (iii) A good stove should be bought, otherwise if cheap and light in construction it is very liable to be knocked or blown over.

Construction of an Oil Stove

A cylindrical case of fairly thin sheet iron covers the lamp and burner, below which is the reservoir. In the lower part of the cylinder is a small transparent panel or window through which can be seen the flame. The stove is provided with a carrying handle which enables it to be easily moved. It stands on four legs, has a height of 24 to 27 in., and the top can often be used as a boiling ring. Modern stoves are finished in vitreous enamel in a soft green colour.

Kinds of Oil Stove

- (a) Those in which oil is burnt in a wick.
- (b) Those in which the flame from paraffin vapour under pressure is made to heat a fire-clay radiator.

E. By means of Closed Stoves

These may burn (a) Coke, or (b) Anthracite. Iron is used for the construction of these stoves, the surface of which can be finished in various ways:

- (a) Black-leaded.
- (b) Enamelled.
- (c) Tiled.

The stove is always placed in or near the fire-place of the room, as the stove must be supplied with an iron flue to enable the products of combustion to escape into the chimney and so into the outer air. The main portion of the generated heat radiates in all directions round the stove. In the lower part there is usually a draught hole by which the air necessary for combustion enters the stove.

Advantages

- (i) Less waste of heat by this method.
- (ii) Much more economical in fuel and labour. These stoves require:
 - Re-fuelling twice daily.
 - Riddling, once or twice daily.

The flues require cleaning every four to eight months.

- (iii) The fuel burns very slowly, and is therefore capable of producing steady heat day and night.
- (iv) Very clean, as it produces the minimum of smoke, soot, and ash.

Disadvantages

- (i) Not cheerful to look at, or to sit beside.
- (ii) Anthracite is an expensive fuel which is occasionally difficult to procure.
- (iii) Closed stoves may produce an unpleasant smell, due to:
 - (a) Some of the gaseous products of combustion escaping into the room. This is made possible by the fact that hot iron is slightly porous.
 - (b) Decomposition of organic matter present in the air coming in contact with the heated sides of the stove and the chimney.
 - (c) Escape of smoke, due to imperfect jointing.
- (iv) The drying of the air may affect the skin, hair, and lungs of human beings.

F. By means of Central Heating

The convenience and success of any form of central heating is dependent on:

- (i) The system of heating used.
- (ii) The method of ventilation employed in the building.

The Cost of Central Heating depends on:

- (i) The initial cost of installation, piping, boiler, etc.
- (ii) The running costs, i.e. labour, fuel, etc.

Ventilation

In no private house is provision made for ventilation except by means of doors and windows. In large institutions, however, special inlets and outlets are incorporated in the building.

The principle on which central heating depends is convection, that is to say, air, when heated, rises and colder air comes in to take its place, thus forming convection currents. The air is heated by passing over or coming into contact with some hot object.

Fuels used for Central Heating

- (a) Coal. Expensive and not often used.
- (b) Anthracite. Very expensive and therefore not often used.
- (c) Coke. Most generally used.
- (d) Electricity. This is generally supplemented by ordinary coal fires.

(e) Oil. This is becoming increasingly popular owing to the ease with which it can be delivered, by means of a pipe line, and stored. Oil fuel can be fed to the boilers automatically, and so labour charges are minimized. It is a much cleaner form of fuel than any other. At ordinary temperatures the fuel oil is non-inflammable until it has been atomized, that is, converted into a state fit for combustion. Thus the storage of large quantities of fuel is perfectly safe. Portable oil-heated radiators are also available, which are capable of heating rooms up to 1,000 cub. feet, one gallon of paraffin giving about 50 hours of warmth. These oil radiators can be obtained in various colours.

(f) Gas.

General Advantages

- (i) Constant warmth.
- (ii) The warmth can very easily be regulated.
- (iii) It is very labour-saving. It does away with the labour entailed in carrying fuel and looking after grates and fires.

General Disadvantages

- (i) The atmosphere may become over-dry and stuffy.
- (ii) The feet may become chilled, owing to the entrance of cold air at ground or floor level.
- (iii) Dirty patches are caused on the walls, owing to the dust and dirt deposited by the warm air rising upwards.
- (iv) It is cheerless and uncompanionable.

Radiators

Radiators consist of tubular columns arranged in parallel rows to provide as large a heating surface as possible. They are generally made of cast-iron, and should be painted to match the wall surface as nearly as possible in order to make them less conspicuous. The older type of radiator, which was thick and heavy-looking, has been succeeded by a very much flatter type which occupies much less floor space.

Number of Radiators or Heating Panels depends on ;

- (i) Whether the radiators or panels are to supply all the heat or whether they are to supply only part of it, the remainder being produced by an open coal fire.
- (ii) Position of the room, whether it is exposed to prevailing rains, winds, etc.
- (iii) Number and size of windows.
- (iv) Area of outside wall.
- (v) Cubic contents of the room.

FORMS OF CENTRAL HEATING

- A. By means of hot water in pipes and radiators.
- B. By means of steam.
- C. By means of hot air.
- D. By means of electric tubular heaters.

A. Central Heating by means of Hot Water

Advantages

As for all central heating.

Disadvantages

(i) As for all central heating.

(ii) Expensive to install in an ordinary small dwelling.

NOTE. A separate boiler and furnace for the central heating system is required. The supply of hot water for domestic purposes and the central heating system are thus kept separate.

This type of central heating is the most expensive to install, but it requires much less fuel to run and therefore the running costs are cheapest. There are two variations of this method:

- (a) The Low-pressure System.
- (b) The High-pressure System.

(a) The Low-pressure System of Central Heating

Water is heated in a boiler having a pipe leading upwards from the top of it to the various parts of the buildings, branching as required to supply radiators. The heated water flows along this system of pipes, which finally conducts the water back again to the lower part of the boiler on the principle that heated water rises and cool water falls.

The pipe entering the boiler is connected with a cistern, which makes good any leakage or waste through evaporation, and the highest point of the pipes is provided with a valve to allow the air and vapour to escape. The water being under the ordinary pressure of the atmosphere does not exceed 212° F. and the vapour pressure is always below that of the atmosphere. There is an outlet to the air, so the only pressure on the water is that due to the weight of water in the pipes, the actual amount of which depends on the height of the cold-water tank above the boiler. The water is heated by convection. An expansion pipe allows for the escape of steam.

(b) The High-pressure System of Central Heating

Pipes are arranged to form a complete circuit, and these are not

open to the air, so that the temperature of the contained water may rise above 212° F. A coil of piping is arranged in the furnace and the pipes connected with this pass through the rooms to be heated, and back to the furnace.

Comparison of High- and Low-pressure Systems

<i>High</i>	<i>Low</i>
(i) Stronger pipes required.	(i) Pipes not so strong.
(ii) Owing to the high temperature of the water a smaller heating surface is required.	(ii) Larger pipes providing a larger surface are required.
(iii) Only one row of pipes is necessary.	(iii) Two rows of pipes are generally required.
(iv) The temperature of the water may be 300° F. diminishing very quickly if the fire becomes low; heat varies at different parts of pipes.	(iv) Temperature always below that of 212° F. Owing to the large volume of water in circulation the temperature does not fluctuate so much.

B. Central Heating by means of Steam

This system costs less to install than either of the hot-water systems, but requires more fuel for heating purposes. In places where large quantities of waste steam are available, such as in factories, it may be economical to utilize that steam for heating purposes. The steam is conducted along pipes where it condenses and gives up a large amount of heat, thereby raising the temperature of the pipes. The steam condenses and the water runs back to the boiler. The temperature of the pipes can be regulated by valves.

C. Central Heating by means of Hot Air

In this system hot air is circulated through a house after being heated by a boiler in the basement. It is the cheapest method to install but the most expensive method with regard to fuel consumption.

The circulation of hot air depends:

- (a) On the movement of the hot air, which rises when heated. This is the method used in private houses.
- (b) On being electrically driven into rooms and corridors. This method is used in institutions.

The air which is heated is either:

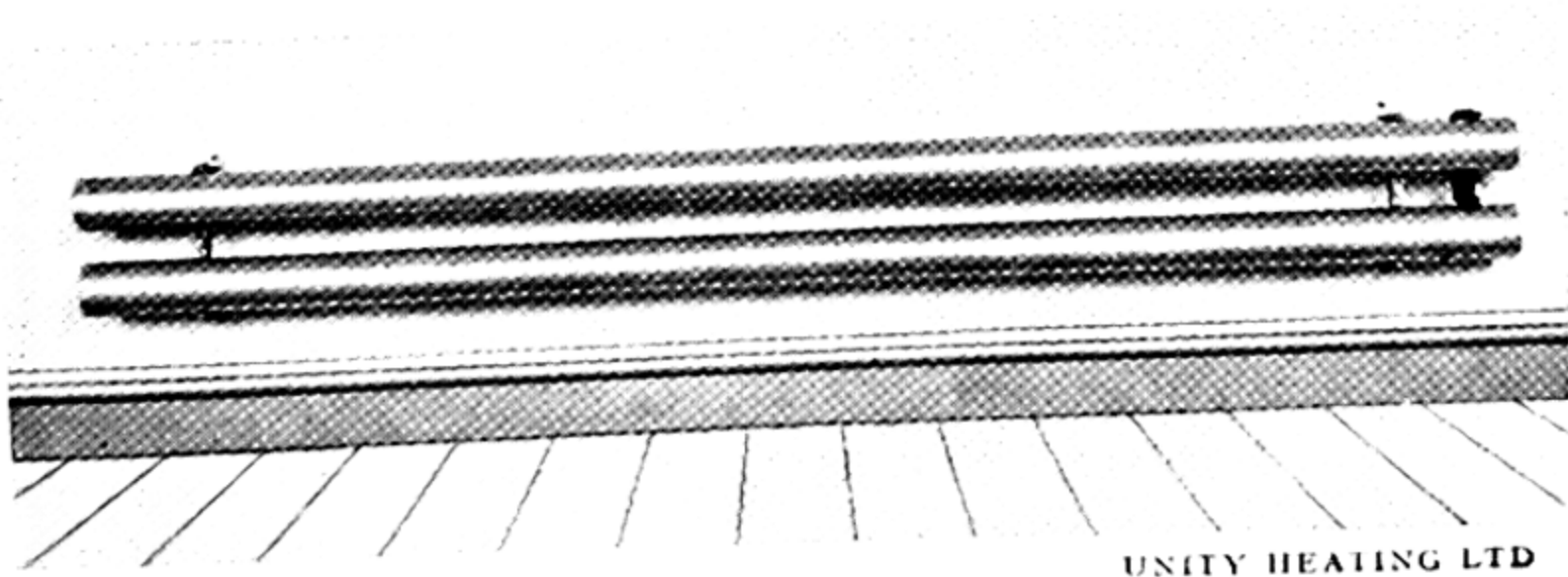
- (a) Fresh air. This requires the consumption of more fuel for heating purposes.
- (b) Vitiating (or used) air already in circulation in the house. This requires less fuel, but is correspondingly unhygienic.

D. Central Heating by means of Electric Tubular Heaters

Tubes or pipes containing elements heated by electricity and placed at a low level in a room have come into use. If painted to match the woodwork or the walls they are inconspicuous and can easily be secured to the skirting-board or the floor.

Tubular Heaters may act in two ways :

- (a) Warming the air in the room by producing air circulation, warm air rising from the pipes and being replaced by colder air.
- (b) In some cases the pipes contain water which is heated—thus enabling a uniform temperature to be obtained throughout, without entailing the use of an element extending the whole length of the tube.



ELECTRIC TUBULAR HEATER

The illustration shows a heater placed above the skirting-board of a wall.

E. A modified form of Central Heating

This can be arranged by supplying two or three radiators from an independent hot-water boiler. These radiators can be placed in a hall, landing, or staircase, or in a room which is not very often used.

FUELS USED AND METHODS OF HEATING A HOUSE • NOTES

CHAPTER XXV

HOT-WATER SYSTEMS

THERE are few situations in a house that cause more irritation than the failure of the hot-water supply. An adequate supply of hot water is essential to the labour-saving house, as by its means efficient and easy working and cleaning is greatly facilitated and comfort materially increased.

The ideal supply should be obtained as inexpensively as possible and be available at any time in reasonable quantities both for household requirements and for baths.

The circulation of the water depends on the fact that warm water is lighter than cold. The water nearest the source of heat rises, while cold water, being heavier than hot, flows in to take its place. Thus there is a constant flow, the hot water rising and the cooler water returning to the boiler.

Hot-water Systems

Thoughtful planning is an essential requirement of a good hot-water system for supplying baths, fitted basins, and the kitchen. One of the chief causes of an inefficient hot-water supply in many existing houses is due to the fact that the water becomes chilled on its way to the storage cistern or cylinder, and continues to be chilled whilst being stored. This means that it returns to the boiler cold or nearly cold.

This serious and wasteful defect should be remedied by some form of insulation, which will conserve the heat of the water, allowing it to remain hot a long time even after the source of heat has been withdrawn.

Method of insulating Pipes

By covering with asbestos or some other non-conductor of heat; occasionally the pipes are boxed in or covered with wood, which can be painted or enamelled to make the pipes less noticeable.

Method of insulating Hot-water Cylinders or Cisterns

As for pipes. Asbestos jackets can also be bought and fitted round the cylinder, or such jackets can be made by the housewife from thick baize or several folds of an old blanket. If these methods are adopted the water will be nearly as hot when it returns to the boiler as when it left it, and fuel will be saved in the production of heat. For if the fire in the morning starts the circulation of warm water instead of cold, a proportion of heat from the previous day

having been retained by the asbestos packing on the pipes and tanks, the requisite temperature for baths and domestic purposes will be reached in a much shorter period of time.

Fuels for Heating Water

- A. *Coal*. Used in an ordinary coal range.
- B. *Coke*. Used in an independent boiler. This fuel is useful, economical, and effective. It demands a certain amount of labour but it can be left untended for fairly long periods.
- C. *Anthracite Coal*. Similar in use to, but more expensive than coke. Gives a very good heat.
- D. *Gas*.
- E. *Electricity*.
- F. *Oil*.

Methods used

A. By means of a stored-heat cooker. Some of the modern stored-heat cookers also heat a small supply of hot water.

B. *Solid Fuel Boiler*. There are many well-known models on the market which are made in all sizes, and burn a variety of fuels, including all household refuse.

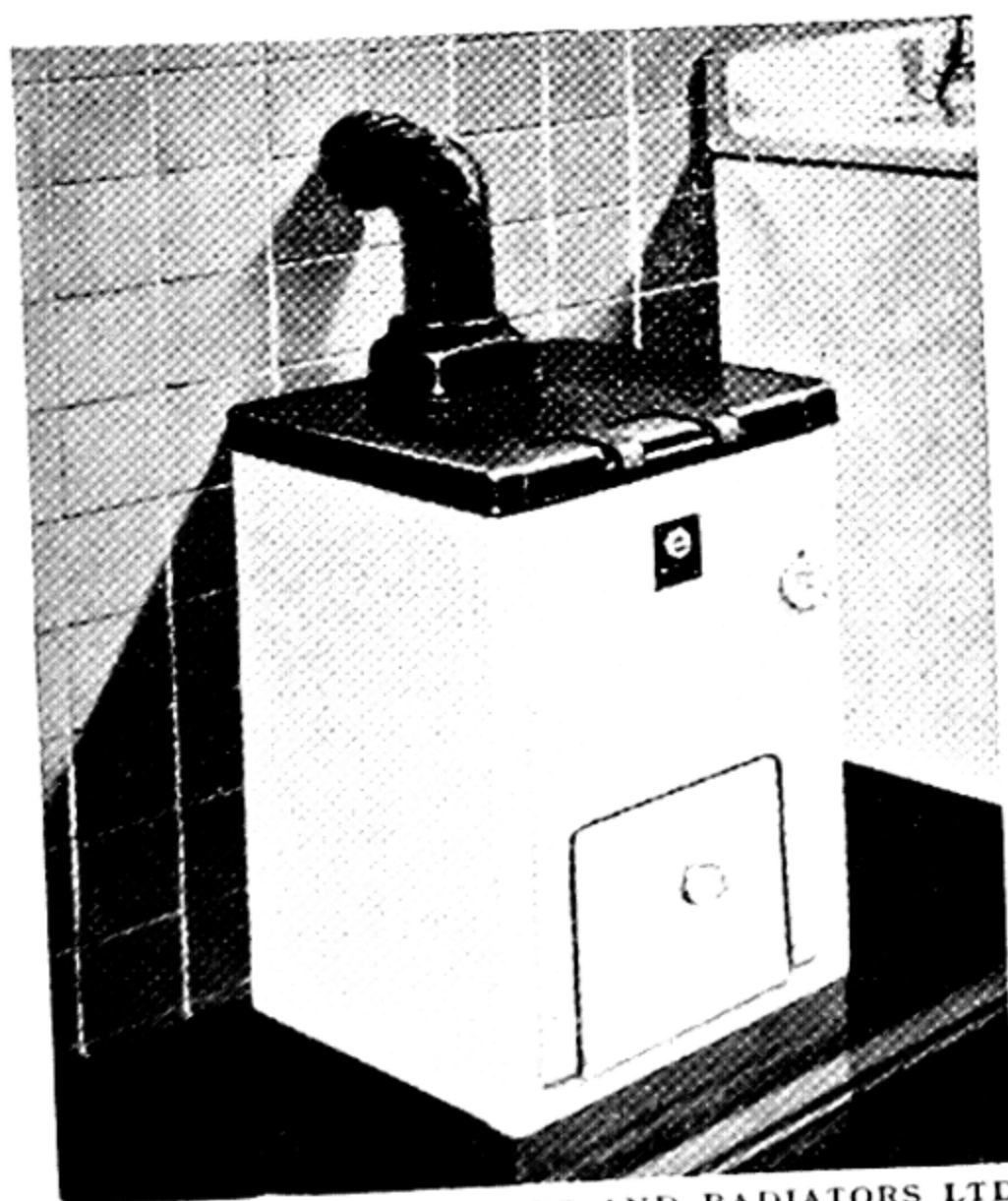
C. *Independent Boiler*. This type of boiler is connected to a circulating system, i.e. the source of heat is some distance from the storage tank or cylinder and the heated water circulates continuously. It will supply draw-off points throughout the home.

A wide range is available, from self-stoking types, which provide enough temperature controlled water to supply a large household and look after central heating, to a small efficient hand-fed boiler suitable for connecting to a 25-gallon hot-water tank. Very little labour is entailed in using and stoking an independent boiler. The contents of saucepans can be kept hot on the top of the stove, which can be used occasionally for slow cooking.

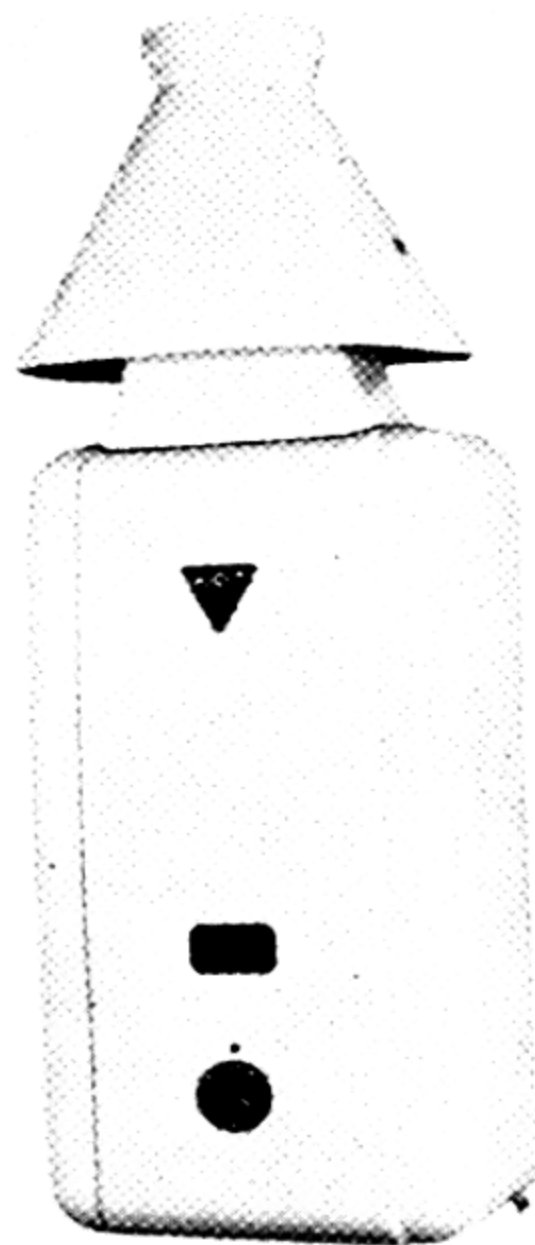
D. *Gas*. A gas-heated circulator, which is a boiler heated by a large gas ring, supplies constant hot water to all taps. It is specially suitable for small flats where no maid is kept, or in houses and flats where hot water is required at stated times only, e.g. in the early morning and in the evening. Most of the designs are provided with a thermostatic arrangement by which the gas supply is automatically lowered when the water reaches a certain temperature. An instantaneous heater or geyser is an arrangement whereby water is heated very quickly for supplying baths, etc., and such heaters are available in two forms:

- (a) Those with one outlet tap only. This is often on a swivel so that both a bath and a hand basin can be served.
- (b) Those which can supply a number of draw-off points. This is economical in use only where draw-off points are close to the heater: long pipe-lines involve much wasted hot water.

The gas circulator consists of a cylindrical metal chamber made of 'staybrite' metal, or enamelled iron. Round the inside is coiled a pipe, down which flows the water to be heated. A row of gas jets is so arranged as to impinge on this coiled



IDEAL BOILERS AND RADIATORS LTD



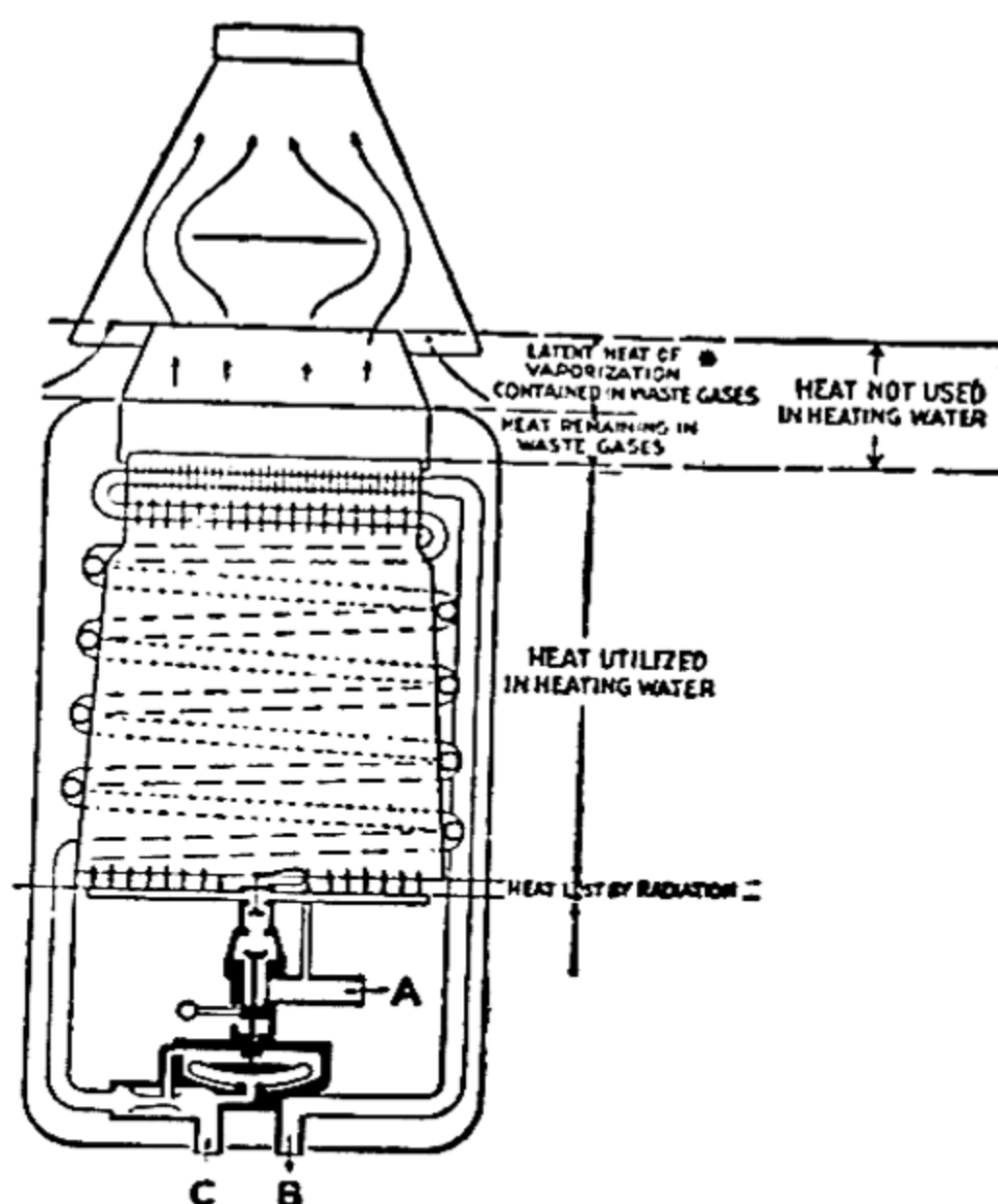
ASCOT GAS WATER HEATERS LTD

WATER HEATERS

Left: 'Ideal' independent boiler; right: 'Ascot' water geyser

pipe, the water thus being heated to the required temperature during transit. Special types of gas heaters can be set to produce boiling as well as hot or warm water. Turning on the water supply automatically operates a valve which opens the main gas inlet, thus making it impossible to turn on the full supply of gas before the water starts to flow through the pipe.

This type of water heater requires very careful fitting, and should always be placed on an outside wall, to enable the flue from the top of the geyser to pass through to the outer air. This enables the products of combustion to escape easily and rapidly, so preventing the accumulation of gases in the room. The outlet flue should be suitably baffled to prevent draught, and must be housed on a draught-free wall to ensure functioning of pilot light.



• The latent heat is utilized in condensing gas water heaters only.

DIAGRAM ILLUSTRATING DISTRIBUTION OF HEAT IN AN INSTANTANEOUS GAS WATER HEATER

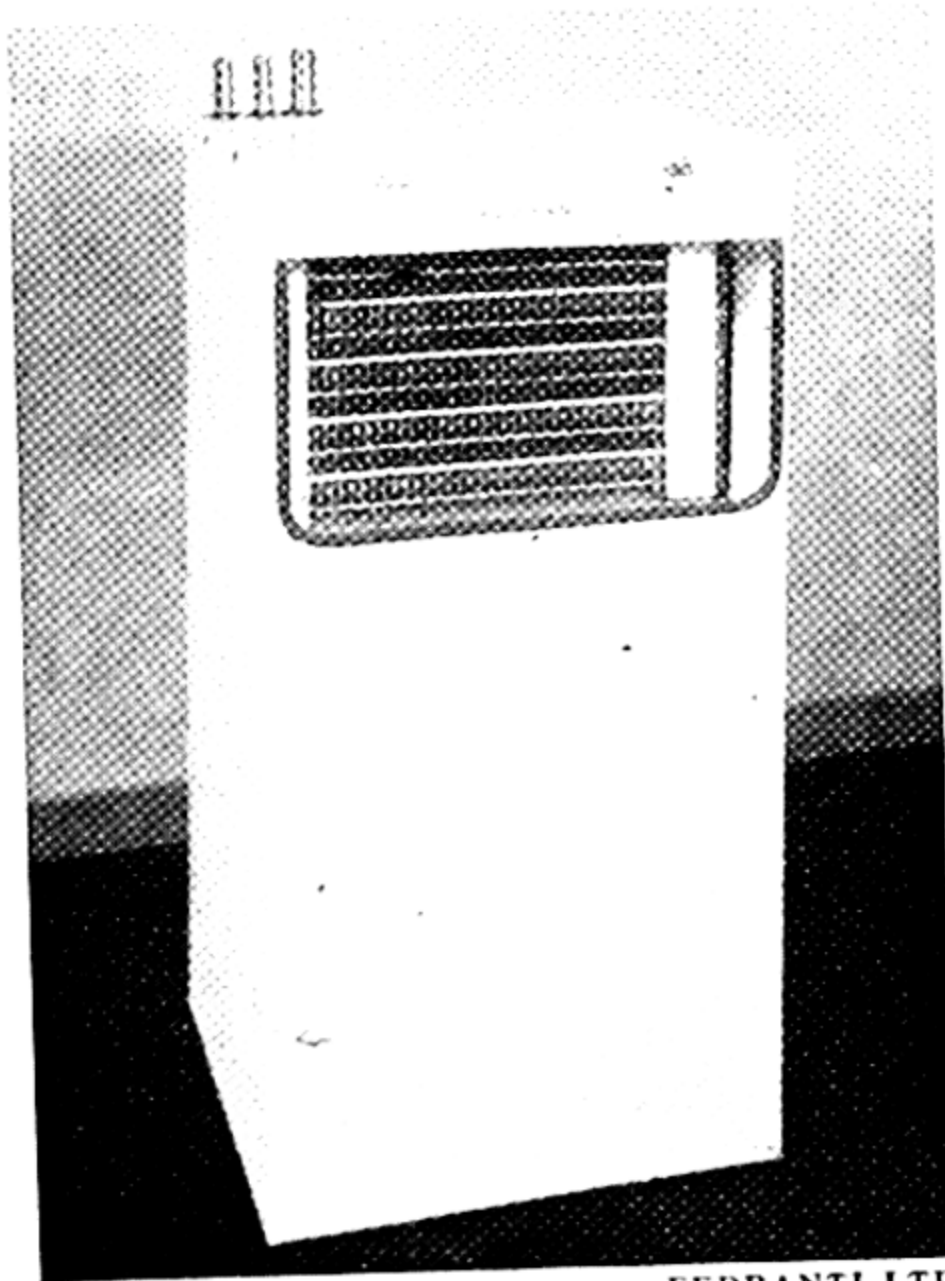
A. Gas supply; B. Hot water outflow; C. Cold water inflow.

E. *Electricity*. This is very convenient, clean, and labour saving, and is specially useful for augmenting a hot-water supply heated in winter by solid fuel, and for replacing solid-fuel heating system during hot weather. Other fittings are designed for insertion into existing tanks or cylinders. They are thermostatically controlled which when fitted ensures economical running.

F. *Oil*. Paraffin oil, burnt in specially prepared geysers, can be used, but this is not a very usual method.

G. *Domestic Heat Pump*, as a source of hot-water supply. This is now in an advanced stage of development, and it is hoped that it will

be placed on the market in the very near future. It is constructed on compact lines, is only 36 inches high and 16 inches wide by 16 inches deep, and is intended for installation in a larder of not more than 120 cubic feet, and is suitable for a 30-gallon hot-water storage tank. It serves the double purpose of cooling a larder and providing a hot-water service in the house. The operation of the equipment embraces the refrigerator principle of the absorption of heat from the air and other contents of a room (in this case the larder) and the transfer of the heat through a suitable medium for a particular service (i.e. water—to give a hot-water supply). When hot water is

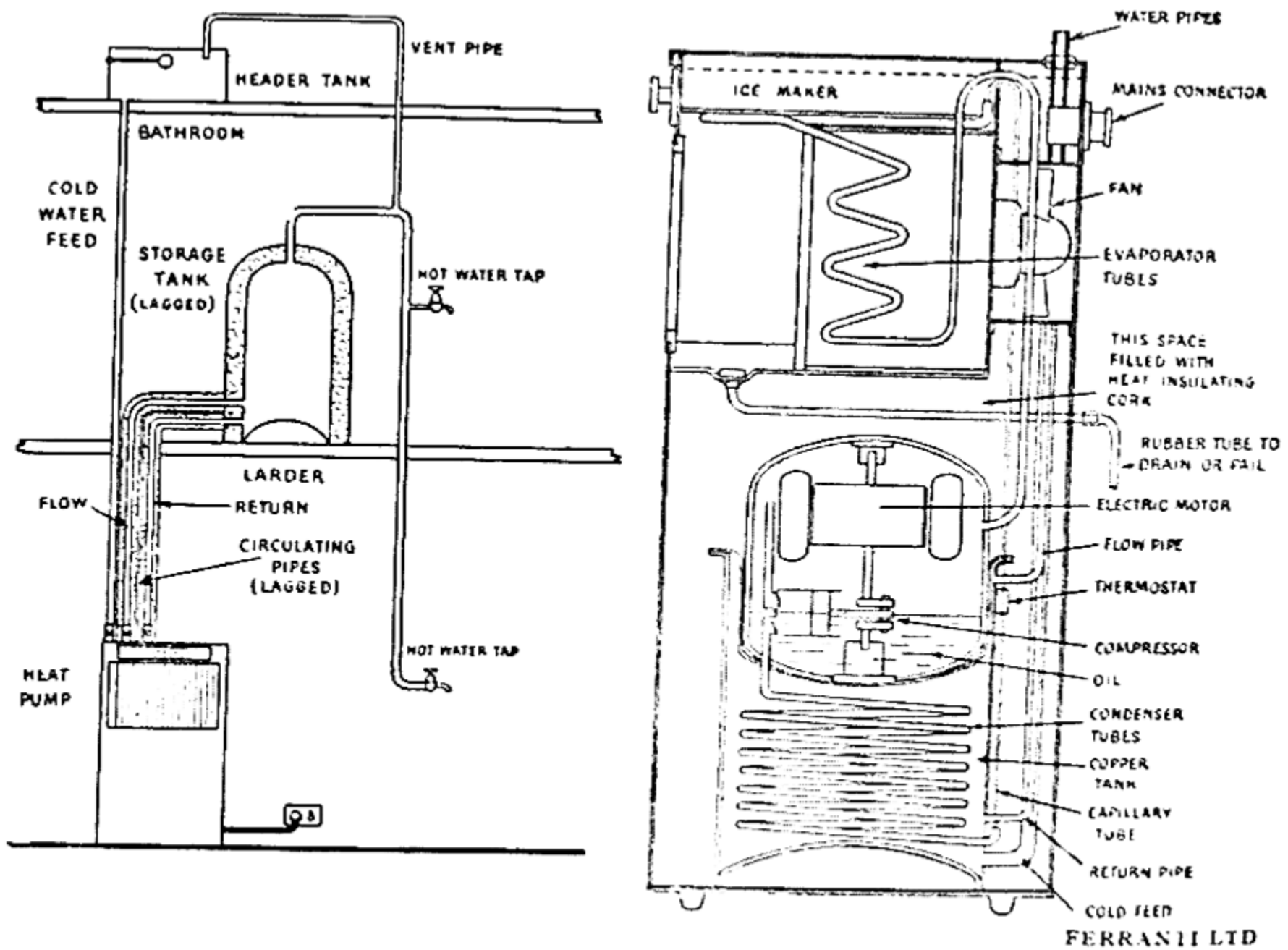


FERRANTI LTD

DOMESTIC HEAT PUMP

drawn off, cold water is automatically fed into the 'Fridge Heater' to replace it. The heat pump is then thermostatically switched on. The heat is transferred to the water by a special vapour which is continuously circulated in the machine, condensing to a liquid in a coil in the water tank. The liquid is then reduced in pressure and temperature by its passage through a capillary tube and passed into the tubes of the evaporator in the top part of the machine. The larder air is blown over these tubes by a fan, causing the comparatively cool liquid to evaporate. This cools the larder air and condenses the moisture in the air with consequent cleansing. The

vapour from the evaporator is then drawn into the compressor and re-compressed to a pressure at which it is hot enough to be condensed by the water surrounding the condensing coil. Raising the temperature of the water in the tank is a cumulative process which continues until the temperature is 140°F. , when the thermostat switches the pump off. It is therefore important for the hot-water tank to be installed in an airing cupboard so that there is sufficient heat loss to cause the thermostat to switch on the heat pump again, thus maintaining the air-cooling process in the larder.



DOMESTIC HEAT PUMP: (*left*) INSTALLATION, (*right*) DETAIL

The amount of heat given up by the vapour on its condensation is three times greater than the amount of heat (e.g. the supplied electricity) required to drive the compressor.

In this heat pump there are also facilities for making ice. Switching to 'ice' stops the fan, which reduces the temperature at which the evaporation process occurs to below the freezing-point of water. When the machine is making ice it consumes rather more electricity for every gallon of water heated and the water is not heated so quickly. The moisture extracted from the air collects in the drip tray and can be drained off. The cost of running this type of heater is very roughly a unit of electricity a head per day.

CHAPTER XXVI

HOUSEHOLD LIGHTING

THE natural lighting of a house is mainly the concern of the architect. It is his business to see that the correct amount of window space is incorporated in the plan of each room. Styles of windows vary greatly, but, as a general rule, the ordinary sash window and the ordinary casement window are the two most often used in the building of private houses. The framework of windows may be of wood or metal. The latter is becoming increasingly popular as it becomes cheaper, the lowered cost being due to the economies of large-scale manufacture. Steel is most often used for the metal window-frames of private houses. Window glass may be:

- (a) Plate glass.
- (b) Sheet glass.
- (c) A commercial preparation known as Vita Glass, through which can penetrate the valuable health-giving ultra-violet rays of the sun, which cannot penetrate ordinary forms of window glass. See pages 144, 150.

Artificial Lighting

In the very beginnings of civilization mankind was busy devising some form of artificial light, and the coming of civilization has increased the human desire to utilize the hours of darkness for work, or for pleasure. The first light was derived from a fire of burning wood, from which it was possible to extract a burning brand and carry it into a cave or other primitive habitation. The quantity of artificial light required in any room or part of a house depends to a considerable extent upon the character of the furniture and the wall decorations. If these are of a dark and light-absorbing nature, more light will have to be provided than if, say, the walls are covered with a light-coloured paper with a good reflecting power.

FORMS OF ARTIFICIAL LIGHTING: CANDLES

The earliest form of candle consisted of a wood splinter dipped in tallow, which was used during the eleventh century. An improvement on this was the rushlight, consisting of the pith

of rushes soaked in household grease and fat and then allowed to dry. The use of cotton or flax in place of the rush pith was an even greater improvement, and alternate dipping into grease and cooling allowed the making of a candle of any desired thickness. In the middle of the eighteenth century the whaling industry produced large quantities of spermaceti, a white wax from the head cavity of the sperm whale, and this was brought into use for candle making. Later still, paraffin wax was used for the same purpose.

Modern candles are usually made from a mixture of paraffin wax and stearin. Tallow, which is a coarse, hard, animal fat, is hardly ever used. The wick is usually made of cotton yarn and is so constructed as to automatically bend over to the outer oxidizing region of the flame, and so is completely consumed.

Candles are now generally used for decorative purposes only and can be bought in very many attractive and artistic colours.

When buying household candles the housewife should remember that they are bought by the pound weight—and the shorter the candle the more candles to the pound. Candles of great length are usually marketed in packets of 3 lb., 7 lb., etc. They are also bought in boxes, but this method is generally used for decorative candles only. Candles should be bought with self-fitting grooved ends which allow them to fit firmly into the socket of any candlestick. Candles should be allowed to dry and harden completely before being used; they burn for a longer time as a result.

LAMPS

Very simple forms of oil lamps are known to have existed several thousand years B.C. In prehistoric days the lamps were probably of stone, and in very early Greek and Roman days clay and terracotta were used, specimens and fragments of which may still be seen in museums.

Construction of a Modern Lamp

A. *A Reservoir for the Oil.* This should be of metal and the opening through which the oil is poured should be closed by a screw cap, thus doing away with the possibility of the cap falling off and allowing the oil to escape.

B. *The Burner.* This holds the wick, which should fit firmly. If loose there is always the possibility of its dropping down into the oil supply. If too firmly fitted it will be difficult to raise or lower. The wick is usually raised or lowered by means of a small

cog wheel. The burner is frequently fitted with a patent extinguisher, which rises and closes over the wick. The burner should be attached to the oil reservoir by means of a long screw—this prevents the burner and oil reservoir from coming apart.

C. The Chimney. This should be of specially toughened fire-proof glass. It is used to protect the flame from external draughts and to ensure steady burning. It regulates the current of air which is essential for burning. It should fit the holder easily; if too tight it will break when the lamp is lighted owing to the expansion of glass.

D. The Shade. This should be of some washable material, usually white or cream, colours which are more in keeping with the idea of light than are the cold blue-whites. The size and shape of the shades vary, but the flare of the shade is related to the size of the surface to be lighted. Broad flaring shades will illuminate a large circle, while snug shades confine the light to a small area.

E. The Mantle. This is used in all modern incandescent lamps, and when heated it becomes white hot, and gives additional light by its luminosity. See *Manufacture of Gas Mantles*, p. 329.

Apparatus required for the Cleaning of Lamps

- (a) Old pair of scissors.
- (b) Chimney mop and polisher.
- (c) Soft tissue-paper.
- (d) Supply of paraffin.
- (e) Small can with spout or an old jug for refilling the reservoir.
- (f) Two soft dusters kept specially for lamp cleaning.

NOTE. All lamp-cleaning apparatus should be kept in a separate box or basket. This prevents the paraffin from tainting any other cleaning apparatus.

Cleaning of Lamps

NOTE. Always work on an old tin tray or on a piece of linoleum.

A. Daily Cleaning

- (i) Collect all the lamps which may have been used.
- (ii) Remove the shade and chimney. Dust the shade and put on one side. Dust the chimney, and if sooty rub with soft tissue-paper to remove the soot; clean the inside with the chimney mop and polisher.
- (iii) Wipe the gallery and burner, using a piece of crushed tissue-paper.
- (iv) Screw up the wick and rub lightly with tissue-paper. This removes all charred parts. Avoid cutting the wicks with

scissors, as it is almost impossible to cut them absolutely straight, and an uneven wick will result in an uneven light.

- (v) Refill the reservoir, using the correct can or an old jug kept specially for the purpose. The reservoir should be three-quarters full. Screw on the cap.
- (vi) Wipe over the whole lamp very carefully with a duster, to remove any drops of oil.
- (vii) Replace chimney and shade.

NOTE. If a standard lamp is being cleaned the stand should be thoroughly dusted before the lamp is replaced.

B. *Weekly Cleaning*

- (i) Remove the chimney and shade from the lamp, and thoroughly dust, wash, rinse, and dry them.
- (ii) Screw up the wick and rub lightly with tissue-paper as in daily cleaning.
- (iii) Unscrew the burner and put on to an old plate.
- (iv) Empty the oil from the reservoir into an old jug, leaving about two tablespoonfuls of oil in the bottom of the reservoir. Use this to rinse out any sediment which may have accumulated. The oil and sediment must be disposed of carefully. It can be used for cleaning, poured over coals, or on to a gravel path.
- (v) Clean the outside of the reservoir and base according to the material.
- (vi) Reassemble the lamp.

C. *Occasional Cleaning*

This is exactly the same as for the weekly cleaning with the additional cleaning of the burner.

- (i) Unscrew the wick, allow it to drop out into an old enamelled basin.
- (ii) Wash the wick in hot soapy soda water, working in a special basin. Rinse in clean hot water; squeeze and dry.
- (iii) Scrub the burner in hot soapy soda water, using an old nail brush.
- (iv) If very dirty boil the burner in hot soapy soda water. Rinse in clean hot water, shake to partially dry, and finish the drying on the plate rack of a range or gas cooker.
- (v) Soak the clean wick in paraffin, and when the burner is completely dry, replace the wick.
- (vi) Reassemble the lamp.

Special Treatment for New Wicks

- (i) Steep in vinegar. This shrinks the cotton

- (ii) Wash in soapy water, rinse, and dry. This makes the wick less fluffy, and the lamp burns more brightly.
- (iii) Steep in oil before using.

Lighting of Lamps

- ✓ (i) Remove the chimney, and screw up the wick slightly.
- (ii) Light the wick and replace chimney.
- (iii) Keep the wick burning low until the chimney is thoroughly heated, and all steam disappears.
- (iv) Turn up the wick as far as it will go without smoking. If it is a duplex lamp both wicks must be turned up until they are level.
- (v) Watch for a few minutes to see that the lamp does not smoke.
- ✓ (vi) Replace the shade.

Methods of Extinguishing a Lamp

- (a) Turn down the wicks and use the patent extinguisher if the lamp is fitted with one; or,
- (b) Turn down the wick, and if there is no extinguisher place a piece of sheet metal or a piece of thick cardboard over the chimney. This cuts off the supply of air and the lamp cannot continue to burn; or,
- (c) Turn down the wick, and blow sharply *across* the chimney top. Never blow *down* the chimney.

When carrying Lamps

Always look straight ahead and never at the light.

✓ Paraffin

This should be perfectly clear, and bluish in colour when seen in the mass. Kerosene is the finest grade of oil, paraffin is not so fine and is therefore cheaper.

Kerosene has a flash point of 100–150° F., paraffin has a flash point of 73° F. The 'flash point' is the temperature at which the oil 'flashes' or at which the vapour of an inflammable liquid takes fire when a light is applied to it. The flash point for paraffin is fixed by the Government at 73° F., as it would be dangerous to use an illuminant with a lower flash point.

✓ To prevent Accidents

- (i) Choose a good oil.
- (ii) Select a good, well-made lamp.
- (iii) Always stand the lamp in a safe place.

- (iv) Always clean and refill by daylight, and not when the lamp is lighted.

To extinguish burning Paraffin. See page 71.

Incandescent Oil Lamps

The method of obtaining incandescent white light is by means of paraffin oil, a cotton wick, and a mantle. The burner is so constructed as to allow air to pass at the proper speed to produce a blue or heating flame, which heats the mantle until it glows and becomes white hot. A taller chimney than usual is required to increase the draught.

Pressure Lamps

These are a specialized form of oil lamp in which the oil is vaporized before being burnt.

Petrol Lamps

A type of pressure lamp, in which the petrol vaporizes and burns with a mantle. This type of lamp is fitted with a pump which increases the pressure and so increases the flame. In some makes the petrol is soaked up into a clay container, and before being burnt the petrol is mixed with air by means of a special burner.

GAS

The gas used generally for illumination is coal gas, distilled from bituminous coal. It is made in large quantities by the various gas companies of towns and cities. The injurious constituents are mostly removed from the gas by cooling, washing, and passing through purifiers, after which the gas is stored in gas holders or gasometers. It is brought to the house by means of pipes, and passes through the gas meter before being used. The cost of gas varies according to the district. Originally gas-light was produced by means of a naked flame of burning gas. About 1780 William Murdock, the son of an Ayrshire miller, used this method to illuminate his front office in the town of Redruth, near Truro. The fact that it was a flame burning without a wick was a great wonder, as up to that time all illuminants had had wicks. A large flaring flame burning at the end of a pipe produced the minimum of light with the maximum of gas consumption, and so in time various primitive burners were invented which screwed on to the end of

the gas pipe, and by their use a much better light was obtained.

The two burners mainly in use at the present time are:

(a) *The 'flat flame' burner.* This is the simplest, and as it does not require any special attention it is sometimes used in cellars and on public stairways.

(b) *The argand burner.* This consists of a hollow cylinder of steatite, with a number of holes round its upper end. The gas issues from these holes and forms one flame which takes the form of a hollow cylinder. If only one hole were open the flame produced would be tall and slender, but with all the holes open these slender flames coalesce so as to form the single argand flame.

Gas lighting was further improved by the invention of the incandescent mantle.

Incandescent Gas Mantles are of Two Kinds

(a) *Upright.* This has the disadvantage of throwing a shadow downwards.

(b) *Inverted.* This gives a better illumination—it throws very few shadows, and can be used for more artistic treatment.

Manufacture of Gas Mantles

A tubular web either knitted or woven from cotton, ramie fibre, or silk is termed the 'stocking.' Ramie is the fabric generally chosen for the manufacture of mantles because it is stronger, leaves less ash on burning, and shrinks less than any other fabric. This material, known in other connections as china grass, has been employed for centuries by the Chinese and Japanese in the manufacture of clothing fabric. It is so tough and durable that it is even used for cordage. The woven 'stocking' is then cut into suitable lengths, one end of each being gathered up by means of an asbestos thread. In the upright mantle an asbestos loop is formed across the gathered-up end by which the mantle can be suspended. The shapeless, soft mantles are then dipped in a solution of 99 per cent thorium nitrate, and 1 per cent cerium nitrate, after which they are stretched on a cone which moulds them to the required shape, and left to dry and harden. The mantle is then ready for the most delicate operation in its manufacture, the 'burning off.' A light is applied to the top of the mantle which is allowed to burn slowly and uniformly downwards. It is then subjected to an intense bunsen flame, which so coalesces the delicate structure as to make it hard and strong enough to stand the strain of actual use on the incandescent burner. The substance of the mantle now

consists of thorium oxide and cerium oxide. To strengthen the mantle sufficiently to allow of transport and handling the burned-off mantle is usually dipped in a solution of collodion, which is burnt off by the consumer when he first applies a light to the mantle.

When using Any Type of Incandescent Mantle

A mixture of gas and air is burnt on the principle of a bunsen burner, i.e. in such proportions that complete combustion takes place; this is shown by the blue, non-luminous flame. The mantle fits over the flame in such a way that it comes within the area of most complete combustion which is in the outer edge of the flame. The heat at this point is sufficient to raise to white heat the material of which the mantle is made.

When using an Upright Mantle

A burner similar in construction to an argand burner is used. In the centre is a hole into which is inserted a fire-clay pin fitted with a forked end, from the top of which is suspended the mantle. The lower edge of the mantle comes in contact with the hot, non-luminous flame which heats the mantle until it glows and becomes incandescent.

When using an Inverted Mantle

This involves much more than just turning down an upright mantle. If this were done the flame would merely turn back and burn up round the head of the burner, so that it could not possibly render a mantle incandescent. A good deal of experiment, therefore, was necessary to perfect the inverted type, but finally by the use of a special needle regulator it was possible to control the pressure of the gas, as well as the supply, so that the burner gave a steady flame and the mantle became uniformly luminous. This incandescent burner has attained great popularity, partly because it throws few shadows, and shines most brightly in a downward direction, and partly because the mantle lasts so well owing to the more favourable method of suspension.

✓ Ignition

This can be:

- (a) By means of matches and tapers.
- (b) By means of a pilot light. This is a very small light kept constantly burning. It consumes an infinitesimally small quantity of gas, and when the supply is increased the pilot light causes the gas to ignite.
- (c) Long-distance ignition. This is particularly useful when

the light has to be fitted in a rather inaccessible position. The ignition is worked in two ways: (i) the gas valve is actuated by the switch, the gas itself being lit by the pilot light; (ii) an electric current is utilized to turn on and ignite the gas at one operation. The amount of electricity required is very small and the expense of the pilot light is saved.

Cleaning

In order to get as good a light as possible from coal gas the burners and fitments should be cleaned regularly.

A. Daily Cleaning

- (i) Dust the shade and fitment very carefully.
- (ii) Avoid touching the mantle.

B. Weekly Cleaning

- (i) As for daily cleaning.
- (ii) Remove the shade, and wash, rinse, and dry it carefully. If the shade is of some unwashable material, it should be carefully freed from surface dust.

C. Occasional Cleaning

- (i) As for weekly cleaning.
- (ii) Remove the mantle and place (a) suspended from a long pin or skewer inside a tumbler; (b) on the table, resting on its own fire-clay ring. Cover with a table glass.
- (iii) Unscrew the separate parts of the burner and with a pin clean out the fine holes through which the gas escapes.
- (iv) If necessary brush the wire gauze which prevents the gas from striking back.
- (v) If the porcelain heat deflector has become sooty it should be washed, rinsed, and dried thoroughly.
- (vi) Reassemble the burner, and light the gas. Adjust the air and gas until there is a good blue flame with no yellow tinge.
- (vii) Turn out the gas, and replace the mantle.
- (viii) Replace the shade, but avoid screwing it on too tightly or it will break when heated.

Acetylene Gas

The plant for making this gas is of simple construction, water being directed to drip slowly on to the calcium carbide, producing a constant stream of gas. The gas is stored in cylinders which when full automatically cause the supply of gas to cease. Before the gas reaches the burner it is purified. The burners are specially constructed for the burning of this gas and in most cases no mantle is used.

The gas burns with a very bright light which has a distinct

resemblance to daylight. The gas-making plant should be situated in an out-house.

Petrol Gas

This consists of a mixture of petrol vapour and air, 5 per cent petrol vapour to 95 per cent air. It is volatile and requires no heat to vaporize it. The air and petrol are mixed as in the carburettor of a car. The motive power for working the plant may be:

- (a) A weight.
- (b) An electric motor.
- (c) Water power.

The amount of gas in the holder controls the starting and stopping of the engine. When the holder is full the motive power is cut off until some of the gas is used.

Calor Gas

In districts where there is no local gas supply, this portable form of gas is extremely useful. See page 302.

ELECTRICITY

✓ This is the youngest of all forms of artificial lighting, and it is the most perfect. In 1873 the first public electric light was installed—the arc light which illuminates the face of 'Big Ben.'

Electric Light Bulbs

The best electric lamps are the tungsten, the bulbs of which are filled with inert gas. These give better service than the vacuum lamps, cost less, and the light they throw out is more nearly the colour of daylight. The glass bulbs are coated with a thin layer of frosting to create a slight diffusion and give shadowless effects. The frosting is applied as a thin spray, or as a veneer, both of which fail to reduce the lighting efficiency by more than a very slight percentage, but the result is a glareless, shadowless light. The 'pearl' bulb is one which has been internally frosted, and the 'opal' is a clear glass bulb with a veneer of frost applied to the outer surface.

✓ The average life of a bulb varies from 800 to 1,000 hours of burning, after which the bulb tends to deteriorate. Good bulbs last longer than cheap ones. It pays to use electric lamps of two or three sizes in an ordinary household. A 25-watt lamp will do for lavatories, passages, and other places which require little light; a 40-watt lamp is generally useful, and a 60, 75, or 100-watt lamp will give good illumination for an average sized room.

Fittings and Fixtures

Considerable thought should be given to the selection of lighting fixtures which, in form, style, and finish, must harmonize with the type of lighting and the style and decoration of the room.

Cleaning

Good fittings and fixtures will always give good return in service if they are looked after and cleaned regularly. Loss of lighting efficiency can generally be traced to a layer of dust on the lamp, only occasionally to old age and the falling off of candle power. Inverted bowls used for indirect lighting readily tend to collect dust, dead flies, moths, etc., and for this reason enclosed units are more satisfactory, but even these cannot be considered absolutely dust-proof. They are usually extremely well designed and simple in construction, and can readily be opened or removed for periodic cleaning.

A. *Daily Cleaning*

Dust the shade, bulb, and flex carefully.

NOTE. The flex must never be wiped over with a damp cloth.

B. *Weekly Cleaning*

- (i) Dust as in daily cleaning.
- (ii) If possible the shade should be washed, rinsed, and dried. Alabaster shades can be most successfully cleaned by wiping with methylated spirits.
- (iii) The bulb should be wiped with methylated spirit. This removes surface dirt, fly marks, and the greasiness which results from condensation. As the spirit quickly evaporates there is no trace of dampness to overcome.

NOTE. If it is impossible for the ring grip fitting to be loosened, the bulb should be removed and cleaned and the shade cleaned whilst in position, but care must be taken not to stretch the flex.

C. *Occasional Cleaning*

- (i) The flex should be inspected and renewed if necessary.
- (ii) Clean as for weekly cleaning.
- (iii) The shade must be removed for cleaning. If this is difficult, the special shade-ring grip tool should be used. This tool is a useful and inexpensive addition to the household tool-box.

NOTE. All cleaning of electric-light units should finish with a good polish with a soft dry duster, so that all surfaces are left as highly polished as is possible.

Neon Lighting

This is a new development in the field of domestic lighting. It has two important advantages:

- (a) Its current consumption is less than the incandescent bulb for equal light output.
- (b) Its light is much nearer approximation to daylight than any other artificial illumination. Consequently it should be possible to use it to augment failing daylight and to merge from daylight into full artificial illumination without any perceptible inconvenience to the eye.

NOTE. There may be increased initial capital cost.

Lighting

A. *Daylight* varies very greatly in intensity at different times of the year under different weather conditions. The amount which enters a room depends on

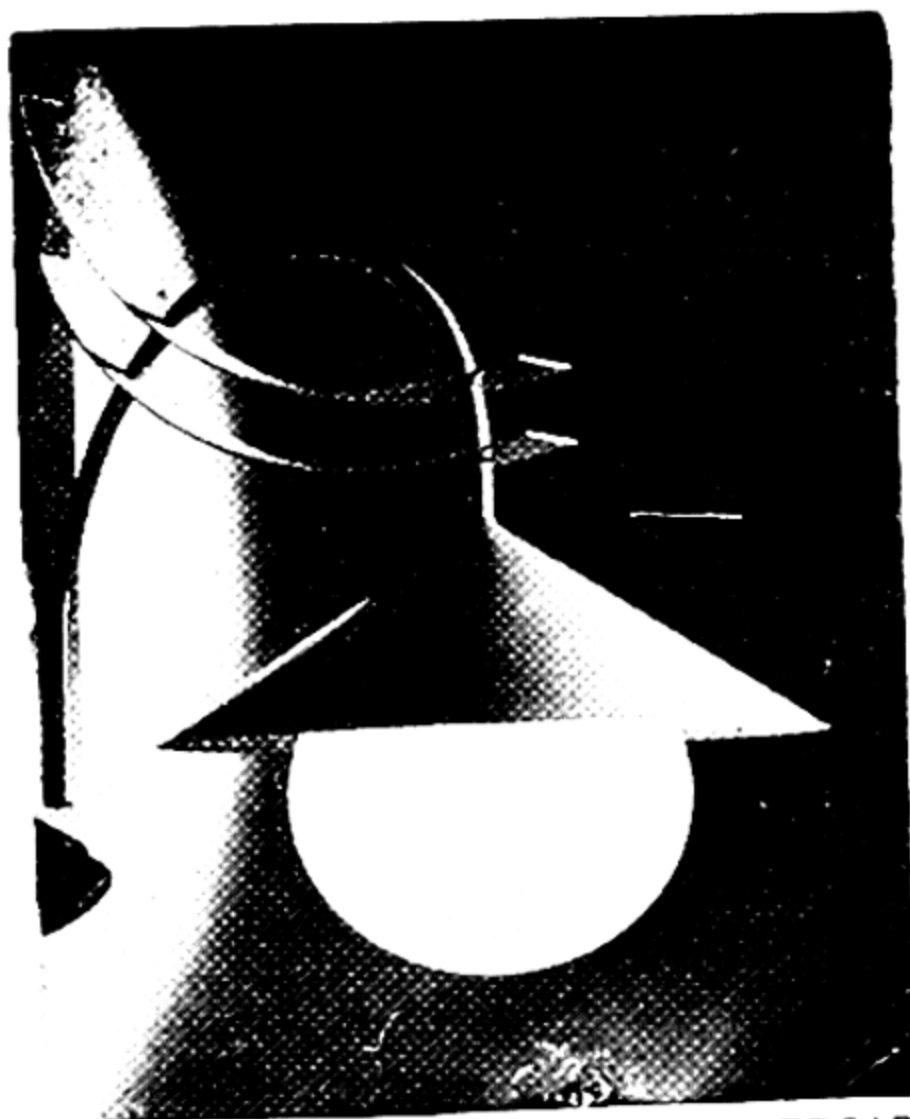
- (a) The size of the windows,
- (b) The degree of external obstruction, if any. In modern housing significant obstructions to light do not often occur, except perhaps in such cases as semi-detached houses with windows facing into a narrow space between houses. When these windows give light to kitchens, serious deficiencies can and do occur.

In the main the problem is simply one of adequate window size for houses.

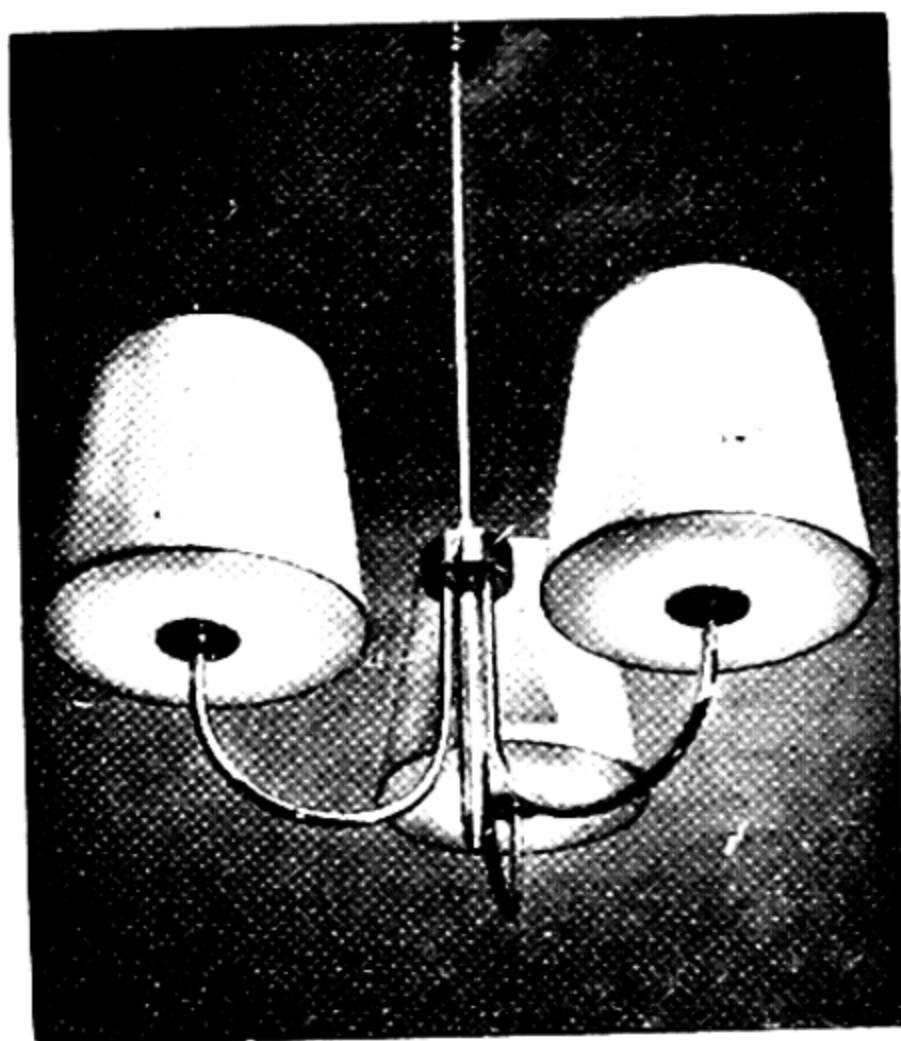
Sizes of windows vary, of course, depending largely on the height of the window head—usually

Lintel of window (head) 7 ft. 6 in. above floor level,
Sill height about 2 ft. 9 in. above floor level.

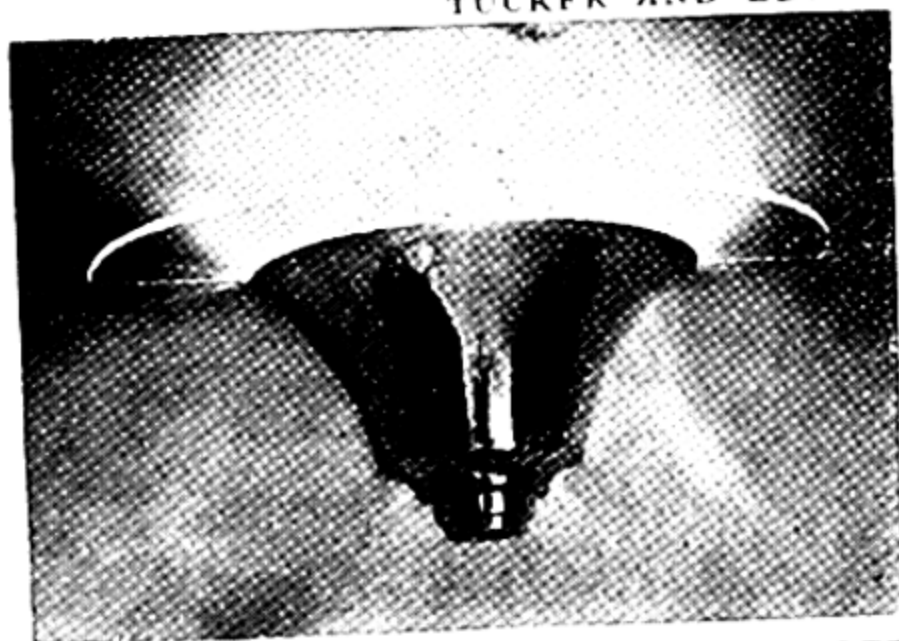
A.	Room	Window width	Glass area	Percentage of Floor area
	<i>Kitchen</i>			
	up to 100 sq. ft.	4 ft. 9 in.	19 sq. ft.	19
	100-120 sq. ft.	6 ft. 0 in.	24 sq. ft.	20
B.	<i>Living Rooms</i>			
	up to 150 sq. ft.	4 ft. 3 in.	16 sq. ft.	11
	150-200 sq. ft.	7 ft. 3 in.	30 sq. ft.	15
C.	<i>Bedrooms</i>			
	up to 110 sq. ft.	2 ft. 9 in.	11 sq. ft.	10
	110-150 sq. ft.	4 ft. 3 in.	16 sq. ft.	11
	150-200 sq. ft.	7 ft. 3 in.	30 sq. ft.	15
		(lintel of 7 ft. 9 in.)		



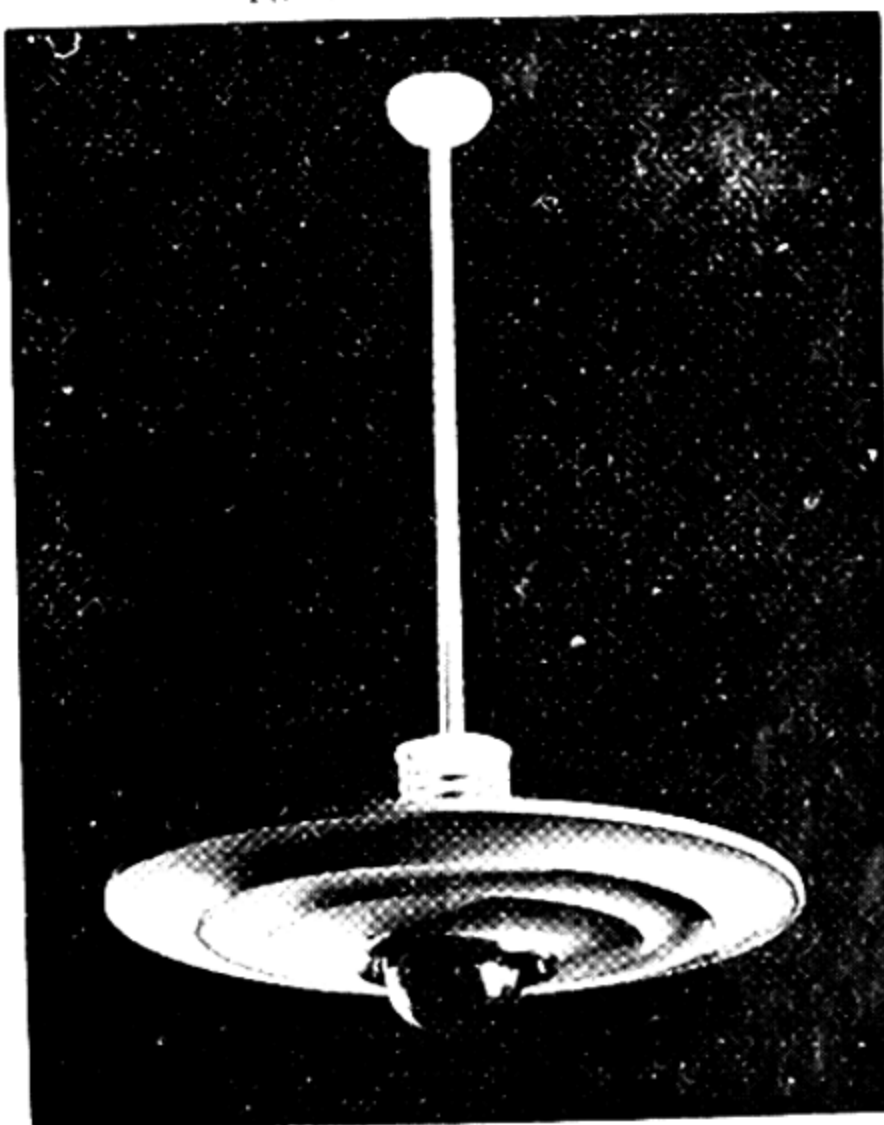
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MAIN SYSTEMS OF ARTIFICIAL LIGHTING

Above: Direct lighting unit, designed by Ian Henderson.

Below: Indirect wall fitting, designed by Anthony Heal.

Above: Semi-indirect triple pendant.

Below: Indirect pendant unit. The hemispherical cap in the base gives a soft illumination to the underside.

B. Good artificial lighting is required in all rooms for work to be accomplished with accuracy, speed, and comfort, the source of light being so placed that deep shadow and glare are eliminated. Bad artificial lighting is harmful to eyesight and may prove more costly than a good supply of electric light properly arranged. Excessive glare or brightness is annoying and harmful to the eyes, and can be eliminated by the use of suitable shades and careful positioning of lights. Unshaded lights should not be tolerated in a private house. Excessive contrast, that is, a very bright isolated light unit in a dark room, is also annoying and causes eye strain, therefore an all-over, general light is desirable. In addition, localized light units can be used on desk or work table to give additional light for reading, writing, or fine needlework. All rooms should have a sufficient number of wall plugs to enable portable lamps of different designs to be used at any point in the room without having to use more than 6 ft. of electric flex. The movable lamp, with its interesting base and artistic shade, is the only medium of home lighting that is flexible enough to allow of movement for the best effects to be obtained. Satisfactory results depend upon the positioning of the lights with reference to the furniture and work units. Effective light distribution may cost no more than ineffective illumination, as the current consumption is often parallel, the difference being that in the first case the current is fully utilized in the right way, whereas in the latter case considerable waste and dissipation of light rays occurs, probably through thoughtless shading, so that a shadowy and rather gloomy effect is produced.

There are Three Main Systems of Artificial Lighting

- A. General or all-over illumination.
- B. Direct. This is also used in a modified form, known as semi-direct.
- C. Indirect. This can also be used in a modified form, known as semi-indirect.

A. *General*

This should be a restful, all-over light.

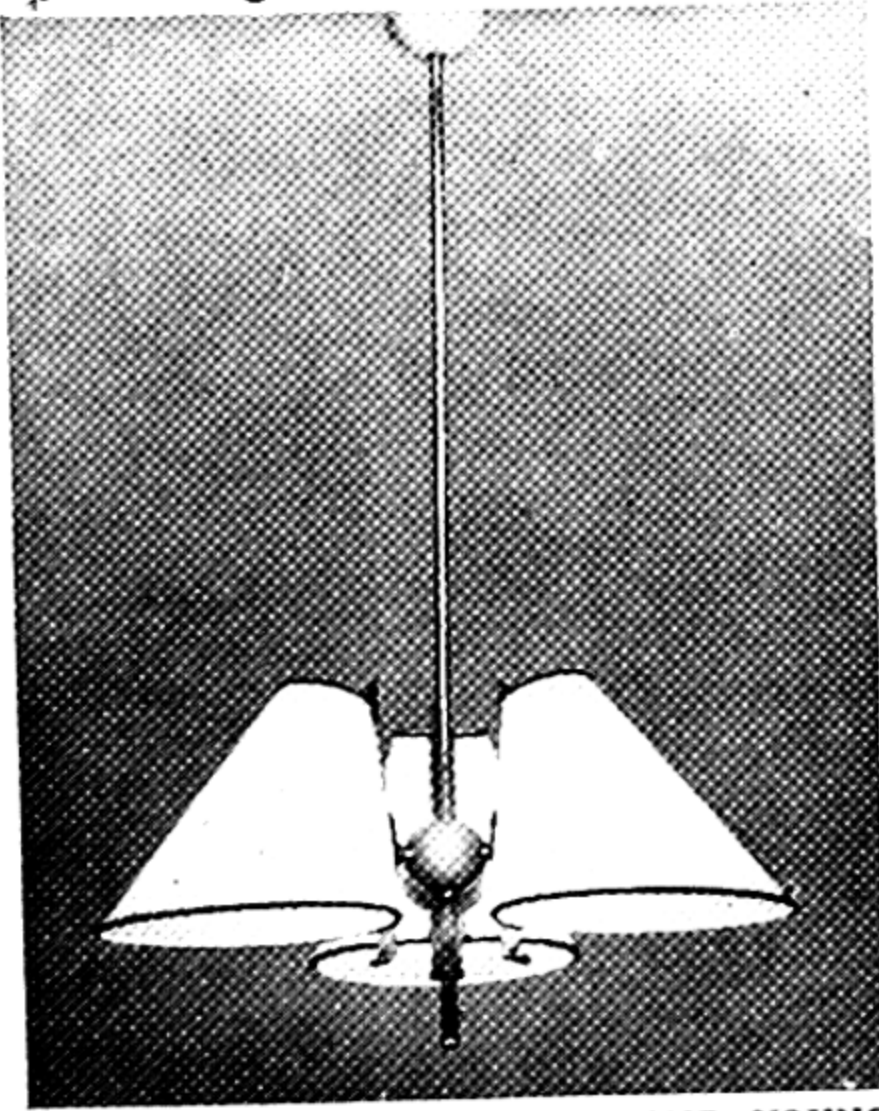
B. (i) *Direct*

The lighting is so arranged that the major part is thrown down directly on to the working surface. This is perhaps the most usual form of lighting, and is frequently seen in the form of the bell-shaped open-end shade or globe suspended from the ceiling. When this method is used the light fixture should be mounted close to the

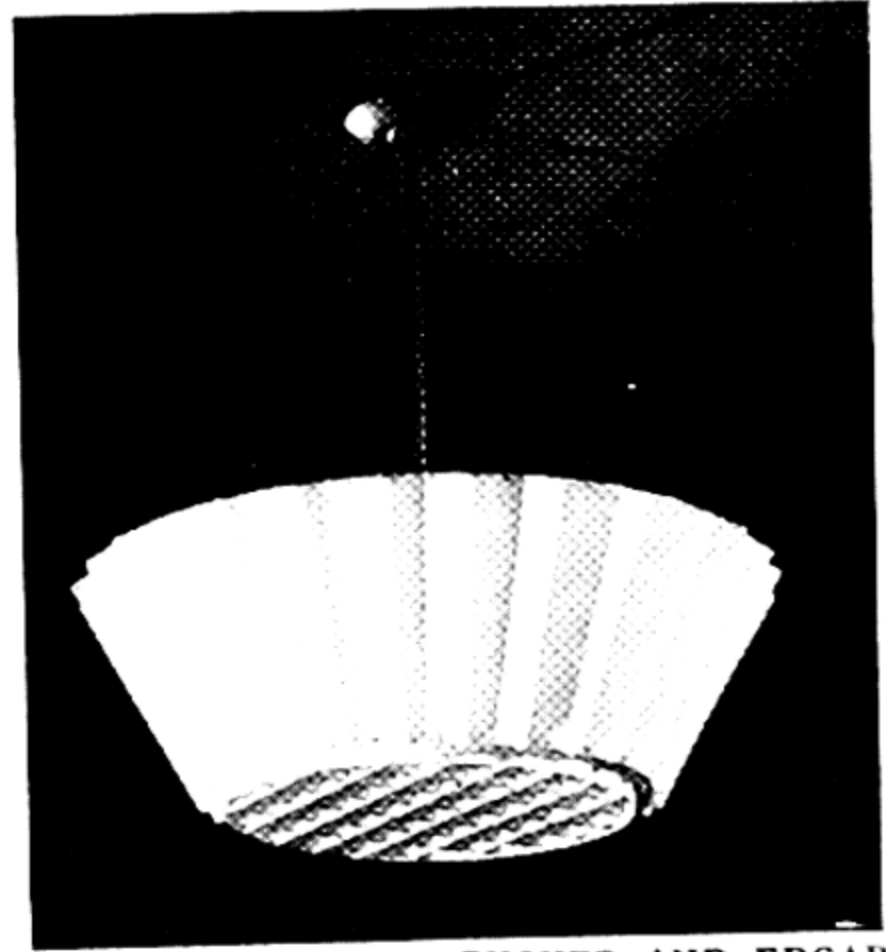
ceiling to eliminate long shadows which occur if the source of light is low.

B. (ii) *Semi-direct*

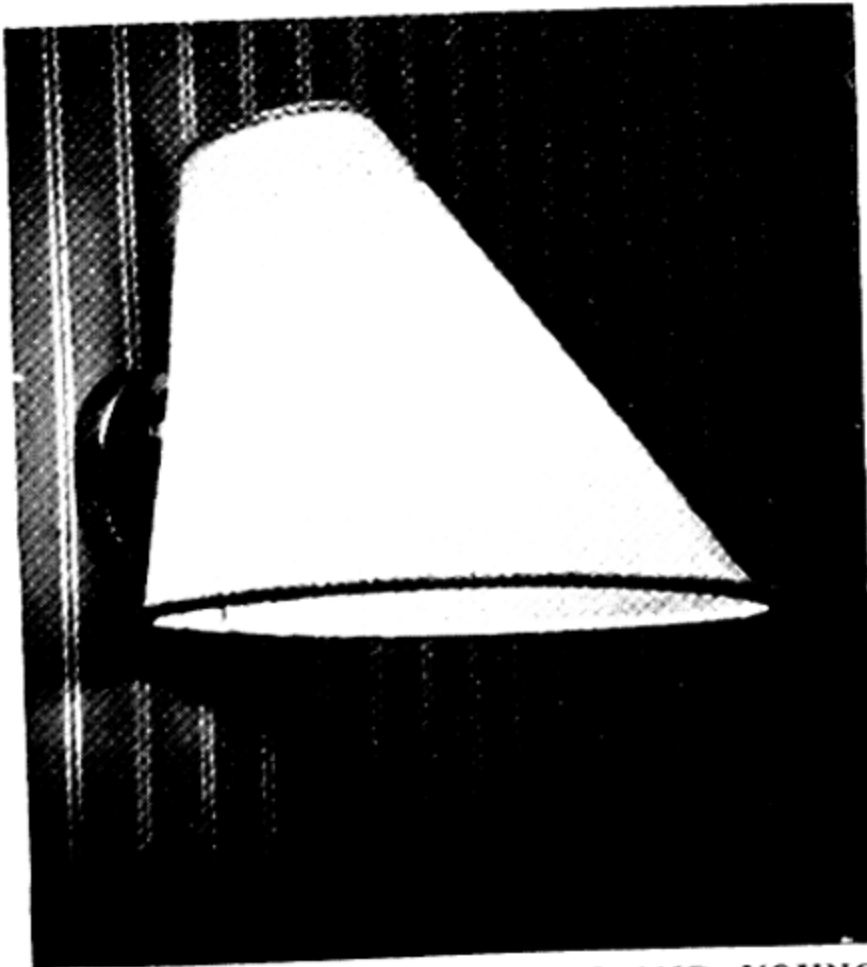
The larger portion of the light is directed downwards, a small part only going upwards, when it is then deflected downwards by the ceiling.



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SOME MODERN LIGHT FIXTURES

C. (i) *Indirect*

In this system the light is reflected to the ceiling, which deflects the light rays and distributes them to the whole room. It is important that the colouring of the ceiling and walls should be such as to reflect the maximum amount of light. The source of light may be screened by opaque bowls lined with reflectors, or may be hidden behind a moulding near the ceiling.

C. (ii) *Semi-indirect*

This is the reverse of semi-direct. Some of the light passes directly to the room, but the major portion is reflected from the ceiling. The light is placed in bowls of diffusing glass.

POSITION OF LIGHT UNITS

A. ~~Outside~~ the House

- (i) *Front Door or Porch.* One unit should be used to illuminate the porch or front door and front step. By the provision of this light, accidents due to slipping or stumbling on an unknown step may be avoided. The light will also illuminate the number or name on the door of a town house. The control switch should be placed inside the front door.
- (ii) *Side or Back Doors.* Each should be fitted with a light unit which may be of lower power than that used at the front door.
- (iii) *Out-houses.* Much inconvenience is caused by unlighted out-houses. A 25-watt lamp will give sufficient general light for medium-sized out-houses.
- (iv) *Garage.* A general all-over light is essential.

B. Inside the House

- (i) *Hall.* A general all-over light spreads a welcoming atmosphere. The light should be controlled by a two-way switch, i.e. one part of the control in the hall, and the other half on an upstairs landing. This type of switch adds greatly to the convenience of using the light, as well as making for economy.
- (ii) *Stairs and passages.* A general all-over light is essential and should be sufficient to prevent falls and minor accidents. Two-way switches can be used with good effect.
- (iii) *Living-rooms.* As these are used for various purposes, such as social activities, reading, writing, fine needlework, etc., in addition to rest and relaxation, general all-over illumination of medium intensity is necessary, with the addition of portable lamps for certain parts of the room.

- (iv) *Dining-room.* A lower intensity of general illumination can be used in the dining-room, as the table is the natural centre of interest and will be lit, either from above by means of a pendant light, or by means of lights on the table. A light unit on the sideboard, or serving table, is very useful.
 - (v) *Bedroom.* A moderate intensity of general illumination is required with localized light units at dressing-table, bed-head, occasionally at a fitted hand-basin, and over a long wall mirror. The switch at the door would control the general illumination only. Other light units would have separate switches.
 - (vi) *Bathroom.* A general illumination of medium intensity should be provided, with one localized light unit over the shaving mirror. Owing to the steamy atmosphere, non-tarnishing and carefully insulated controls are most important. The light should be in the form of a built-in fitment to prevent damage from flapping towels.
 - (vii) *Kitchen.* This room should be provided with a general illumination of moderate intensity, so arranged as to eliminate shadows. It is ideal to have each working surface illuminated by a separate light unit. If this cannot be afforded an alternative method can be used, consisting of two ceiling lights of the built-in type arranged diagonally on the ceiling.
 - (viii) *Cellar.* This should not be forgotten. The lighting should be sufficient to illuminate all corners.
 - (ix) *Attics and Box-rooms.* These also require a general illumination of medium intensity.
 - (x) *Cupboards, Pantries.* Great inconvenience is occasioned if these are left in darkness. They can be effectively and inexpensively lit, and the consumption of electricity controlled, by the use of special switches. These switches are of two kinds:
 - (a) Those operated and controlled by the opening and shutting of the door.
 - (b) Those which, when pressed, illuminate the cupboard for a given length of time, after which the supply of electricity is automatically switched off.
- 

APPENDIX

HOME-MADE POLISHES

THE custom of making cleansers and polishes at home has now become almost obsolete, as so many excellent and cheap preparations, in varying sized packets and tins, can be obtained in shops and chain stores. The following polishes are, however, quickly and easily made, and are successful and efficient to use.

Polishes

(i) *Silver polish* (powder)

8 parts precipitated whiting

1 part jeweller's rouge.

Thoroughly mix the ingredients and store in a dry tin or box. Label the container.

(ii) *Silver polish* (liquid)

$\frac{1}{2}$ oz. shredded soap

$\frac{1}{2}$ pint boiling water

3 oz. precipitated whiting

$\frac{1}{4}$ oz. jeweller's rouge

1 tablespoonful ammonia

2 tablespoonfuls methylated spirit

Dissolve the soap in the boiling water, and allow to cool. Pour into a bottle containing all the dry ingredients. Add the methylated spirit and ammonia. Keep the bottle well corked, and shake well before using. Label the bottle.

(iii) *Floor Polish*

This can also be used for dark-coloured furniture.

Place a small quantity of beeswax in a jam jar. Cover with turpentine and leave for a few days. Cover the jar with brown paper, but stir the mixture occasionally. In a week it should be soft and creamy, and can be diluted with more turpentine until the required consistency is obtained. Label the jar.

NOTE. The process may be hastened by putting the jar into a warm place.

(iv) *Furniture cream*

$\frac{1}{2}$ oz. white wax (paraffin wax)

1 pint petrol.

Break up the wax into small pieces. Put into a screw-topped, wide-mouthed jar. Add the petrol, screw on the top, and leave for forty-eight hours. The wax will dissolve and the mixture become creamy. Label the jar.

(v) *Furniture polish* (liquid)

2 parts linseed oil

1 part each of turpentine, vinegar, and methylated spirit.

Put the ingredients into a bottle, keep well corked, and shake well before using.

NOTE. A graduated medicine bottle is useful for making this polish. The part may be a liquid measure, e.g. cup, spoon, gill, etc., or a ruler or tape measure may be held against the bottle and an inch used as a unit of measure.

(vi) *Pewter polish*

$\frac{1}{2}$ oz. soft soap

$\frac{1}{4}$ pint boiling water

2 oz. rotten-stone

4 tablespoonfuls turpentine

Make in the same way as the liquid silver polish. Add the turpentine last.

Sweeping Compounds

Clean sand and fine sawdust form the basis of all sweeping compounds. The finer the particles of these two substances the better will be the prepared combination.

A. *For use in out-buildings or on stone floors*

Fine sand	40 parts
Sawdust	50 "
Water and Lysol	10 "

B. *For polished wood and linoleum floors*

Fine sawdust	32 parts
Fine sand	12 "
Salt	12 "
Paraffin oil	2 "
Paraffin wax	2 "
Pine oil	1 "

C. *For carpets*

Fine sand	40 parts
Fine sawdust	30 "
Paraffin oil	15 "
Water	15 "

METHOD OF PREPARING

- (i) Mix thoroughly in a large bucket or bath.
- (ii) Fill a convenient sized tin, the lid of which has been perforated to allow the compound to be sprinkled over the floor.

N.B. Sweeping compounds can also be bought commercially.

To remove stains from baths, sinks, and hand-basins:

- (i) Make a paste of cream of tartar and hydrogen peroxide, smooth over the stain and leave for 10-15 minutes.
- (ii) Rinse with warm water and dry. The stain should have entirely disappeared.

When life is woe
& hope is dumb.
World is say's Go.
Grave say's Come.

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